Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River



Commission d'enquête sur le déclin des populations de saumon rouge du fleuve Fraser

Public Hearings

Audience publique

Commissioner

L'Honorable juge / The Honourable Justice Bruce Cohen

Commissaire

Held at:

Tenue à :

Room 801 Federal Courthouse 701 West Georgia Street Vancouver, B.C. Salle 801 Cour fédérale 701, rue West Georgia Vancouver (C.-B.)

Thursday, September 22, 2011

le jeudi 22 septembre 2011

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No appearance Musgamagw Tsawataineuk Tribal

Council ("MTTC")

Ming Song Heiltsuk Tribal Council ("HTC")

TABLE OF CONTENTS / TABLE DES MATIERES

PAGE

PANEL NO. 65:

LAURA RICHARDS (recalled) In chief by Mr. Wallace

40/52/55/56/57/78

DAVID BEVAN (recalled) In chief by Mr. Wallace

5/6/7/8/10/12/15/18/19/21/ 24/33/35/46/66/72/75/83

CLAIRE DANSEREAU (recalled)

In chief by Mr. Wallace

2/3/4/5/8/15/16/17/26/28/ 35/38/44/46/54/58/63/69/73/ 77/82/83

SUSAN FARLINGER (recalled) In chief by Mr. Wallace

2/9/10/12/13/14/15/20/23/ 25/28/32/34/48/55/57/60/63/ 68/69/76/79/83

- vi -

EXHIBITS / PIECES

<u>No.</u>	<u>Description</u>	<u>Page</u>
1913	Formerly P for identification - Meeting notes from the Pacific Fisheries and Aquaculture Committee	
1914	working group meeting of March 11th, 2005 Evaluation of Uncertainty in Fraser Sockeye	2
1915	Wild Salmon Policy Status using Abundance and Trends in Abundance Metrics, July 5, 2011 draft Evaluation of Uncertainty in Fraser Sockeye Wild	52
1916	Salmon Policy Status using Abundance and Trends in Abundance Metrics, August 25, 2011 draft Wild Salmon Policy Final Work Plan,	53
	July 15, 2011	61

Vancouver, B.C./Vancouver 1 2 (C.-B.)3 September 22, 2011/le 22 4 septembre 2011 5 6 The hearing is now resumed. THE REGISTRAR: 7 The hearing is now resumed. THE REGISTRAR: Order. 8 MR. WALLACE: Good morning, Commissioner Cohen. 9 Brian Wallace, Senior Commission Counsel, and with 10 me this morning for this panel are Patrick McGowan 11 and Jennifer Chan. 12 The panel, today, and for the next five days, 13 appearing, it's the final five days of our 14 evidentiary hearings, are the senior DFO officials 15 who we've -- all of whom have returned from 16 previous visits here, and we've described this as 17 priorities and summary panel. 18 And Mr. Commissioner, I know you know all 19 these people, but just for the record, the closest 20 to you is Dr. Laura Richards, who's the Regional 21 Director of Science for the Pacific Region; David 22 Bevan, Associate Deputy Minister; the Deputy 23 Minister Ms. Claire Dansereau; and the Regional 24 Director General Sue Farlinger. 25 We'd like to just remind the witnesses, 26 you've all been here before, at which time you were previously affirmed to tell the truth in 27 28 these hearings, and that still applies. 29 30 LAURA RICHARDS, recalled, 31 warned. 32 33 DAVID BEVAN, recalled, warned. 34 35 CLAIRE DANSEREAU, recalled, 36 warned. 37 38 SUSAN FARLINGER, recalled, 39 warned. 40 41 EXAMINATION IN CHIEF BY MR. WALLACE: 42 43 I have one housekeeping matter to deal with by way 44 of a document that has been serviced in the

hearing a number of times and has been given the identifier of Exhibit B (sic) for identification.

It is the first document in the Commission's list

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46 47

of documents. This is a Pacific Fisheries and
Aquaculture Committee Working Group Meeting
minutes -- meeting notes from March of 2005, and
Ms. Farlinger, you were in attendance. I wonder,
please, if you can just identify that?
Did I get that wrong? Exhibit P for

identification, thank you. If you can just identify that document as being as it's described?

MS. FARLINGER: Yes.

MR. WALLACE: Thank you. Mr. Commissioner, may that be marked as the next exhibit, please.

THE REGISTRAR: 1913.

EXHIBIT 1913: Formerly P for identification - Meeting notes from the Pacific Fisheries and Aquaculture Committee working group meeting of March 11th, 2005

MR. WALLACE:

Q Let me just start, then, with a question for Ms. Dansereau and Mr. Bevan, and these are -- the first series of questions will deal with funding issues, and in particular the strategic review and strategic and operational review.

The strategic review was a 2010 funding exercise, as I understand it and as we've heard, that looks at cuts of five percent, and it's described as looking at DFO priorities and intended outcomes to determine whether DFO programs were aligned with its priorities. Currently, there's a strategic and operational review ongoing, with a goal of five to 10 percent, as I understand it, and it's described as considering redesigning the delivery of current programs, also, but asks: Do these programs need to be delivered by public servants the same way, or can they be changed to reduce costs? The question is DFO — or the assertion is that DFO needs to change how it does business.

If I may ask about the strategic review, what was the actual budget cut to DFO as a result of the strategic review?

- MS. DANSEREAU: 56.8 million.
- Q And by way of percentage, that is how much? Is it the five percentage?
- MS. DANSEREAU: No, it's about three percent.
 - Q Thank you. And how much is being cut pursuant to

the strategic and operational review, and when will these cuts take effect?

- MS. DANSEREAU: The number is obviously not finalized because we are in the process, right now, of developing the proposals and having them considered by Treasury Board and by cabinet, so we are in no way able, at this point, to give a number because we haven't come to the end of the process.
- Order of magnitude?
- MS. DANSEREAU: Well, five and 10 percent.
- Q Okay. And when will these cuts begin to take effect?
- MS. DANSEREAU: The strategic and operating review, also known as the Deficit Reduction Action Plan, would come into effect April 2012, and be for a duration of three years. Not that the money would come back after three years, but they would be implemented over a three-year period.
- And so that's five percent, five to 10 percent annually. It's not a diminishing amount, it stays at five to 10 percent?
- MS. DANSEREAU: So far, yes.
- What consultation has taken place with respect to these decisions? Has there been any consultation with DFO regional or field staff?
- MS. DANSEREAU: There's definitely been consultation with DFO regions. The consultation, though, because these are budget processes doesn't go very completely deep into the Department, nor outside of the Department, as is fairly standard for these kinds of processes. But on certain elements, information is sought without necessarily discussing the overall proposals, because of cabinet confidences.
- Q So just to reiterate, and there's been no consultation outside of the Department?
- MS. DANSEREAU: No consultation whatsoever.
- As I understand the strategic and operational review, it considers whether DFO should be performing certain tasks and whether some can be performed by others. If the public and stakeholders are being considered as possibly taking up some of these tasks, why would it not have been appropriate to determine capacity and willingness to do some of these things?
- MS. DANSEREAU: It's a standard, as I said, it's a

standard process for government in preparation for budget documents. There is a general type of consultation and we are, as I think you know, now, in constant consultation with our stakeholders, so we have a fairly good sense of what is possible. But really, the job right now, as the job should be for any government at any time, is to look at what we do and how we do it, and this is something that should be done on an ongoing basis, anyway, and we should be the ones looking at that.

- Q Okay. But am I correct that part of the strategic and operational review is to look at whether or not there are others who can do things that DFO is currently doing?
- MS. DANSEREAU: Yes.
- Q And who are you looking at for that; other levels of government or stakeholders?
- MS. DANSEREAU: In some -- yes, in some cases, yes.
- Q Non-governmental organizations?
- MS. DANSEREAU: Mm-hmm. Yes.
- Q Ms. Dansereau, is there a level of funding below which DFO will not be able to manage the fishery and protect the fisheries resource?
- MS. DANSEREAU: I'm not sure that there's an answer to that question. Obviously, if there was zero money there would be zero management and we organize around what we have. So I would say we will continue to do the best that we can with the resources that we have and will continue as resources diminish. We will continue to focus and priorize (sic) and make sure that we are protecting the resources to the best of our ability with the resources that we have.
- Q Is it your job to advise government on when these cuts are threatening DFO's ability to do its job?
- MS. DANSEREAU: If we felt that we absolutely could not find any savings then yes, we would.
- Q Have you given such advice to government with respect to these proposed cuts?
- MS. DANSEREAU: No.
- Q One of the issues that's come up in funding cuts is the impact on harvest enforcement, and Randy Nelson has testified here that there's an ever increasing amount of pressure and workload put on fisheries officers and that conservation and protection is at capacity in terms of enforcement. We've also heard that there are areas of the coast

that are infrequently patrolled. Despite this, we've heard that C&P is facing funding and possibly personnel cuts through the Strategic and Operational Review and the non-renewal of what's been referred to as the Williams PICFI-based funding.

Are you concerned about that impact of these cuts on C&P's ability to conduct a credible enforcement program?

MS. DANSEREAU: It's my job to always be watchful and to make sure that we don't put forward proposals that would result in an inability to do work. There are different definitions, as I'm sure you are aware, different definitions as to what work should be done, and that's why we have extensive processes to define priorities and to also, though, define -- redefine, on an ongoing basis, as every government should, how we do our work. And, as you know, I think you know the C&P group is looking at that at the national level and within each of the work units.

So, to as the fisheries change, how we enforce and how we monitor also ought to change, and so budget levels that might have been required a number of years ago may not be the same budget levels that will be required in the future; they may be more, they may be less. But it requires that we have adequate planning processes with the input of the C&P officials and others, as well, on the management side, to help us priorize.

- Q Mr. Bevan, you were a former director of conservation and protection nationally, I believe. Do you have any observations about the risks on funding to conservation and protection in British Columbia?
- MR. BEVAN: The levels of funding for conservation and protection in British Columbia and how we distribute the resources across the country have always been a question that requires constant re-evaluation, so it's not like it's static. You have to look at what your situation is and determine if there's capacity to make changes.

With respect to the C&P, what the role, on an annual basis is, is to evaluate risks, evaluate your performance from a previous year, look at your risks for the coming years, set your priorities, look at ways to realign how you do

your business, how you do your enforcement activities, look at opportunities for new technologies and new approaches.

Clearly, if you're doing the same thing year over year and your budget declines, you're going to have a decline in your activity. If, on the other hand, you're looking at use of new electronic information procedures, such as vessel monitoring systems and e-logs and databases that can be compared looking at your -- where you're spending your patrol hours, what the outcomes were, we expect managers in C&P to do all of that prior to coming to seek changes to resourcing levels or to justify continuation of B-base money. That's the kind of thing that we would expect, and it's not acceptable to have someone say, "Look, I'm going to do it the same way, I'm not going to change, and if I don't get this renewed there'll be an impact on patrol hours." That's not something that we would want to see on a management team. We would want to see how they've evaluated the risks, how they're going to manage those risks, and how they're going to make changes to their business approach to doing the compliance work.

If, after all of that, there's still a gap, then we would consider it on a national basis. But that's the process that we would go through. And someone coming to us and saying, "Look, I'm going to lose 14 or 15 people and I don't want to change anything," is not going to get a very kind reception, unless they've done their homework. Your answer suggests that the solution lies in bringing in new technologies and replacing people with a different kind of enforcement technique; is that correct?

MR. BEVAN: We've gone from -- the act of enforcement was the focus that we've had in the past, where we send people out to do monitoring, control and surveillance. That can definitely find poachers, find non-compliance, but it finds one individual, it doesn't deal with the whole system. So what we've tried to move to is going to education and shared stewardship, bringing people along to understand the need for conservation, the need for compliance. Yes, we'll have monitoring, control and surveillance, but we also need major case

 investigations so that if you have a systemic problem in a location or in a particular component of fish harvesting and processing, et cetera, you spend the resources to get at that systemic problem.

And we've seen in many examples, where we've used different datasets, we establish datasets so that officers can look at various sources of information, look for anomalies, and focus their investigations there, those are the kinds of things that we would expect to be looking at, rather than just saying, "Okay, I had this amount of resources, my workload's gone up, I want more." We need to have a better business case so we can seek continuous improvement.

I'm not saying that we're going to say we can get rid of lots of fishery officers by introducing new technologies, because there is an increasing workload. But I am saying that it's not a simple number of fishery officers versus what was in the past and what's coming in the future. There needs to be a continuous challenge function put together by the regional office and by the national office to say, "Okay, let's look at better ways to get the job done," and we've seen some significant outcomes in the number of areas across the country where we've uncovered systems of non-compliance that were picked up through new technologies and new ways of using information, and that's what we expect across the country.

Q Have such successes occurred in the Pacific region?

MR. BEVAN: There have been successes in the Pacific region, but I can't point to one specific to Fraser River sockeye and some of the testimony you've heard, but I think that there's opportunity in the very near future to employ the new technologies that are being — and new processes that are being introduced already in the salmon fishery in British Columbia, and that is better use of information on a real time basis. Use of sales slips and records of that nature is not going to give you the tools you need to deal with real time problems, and I think there's a better way to approach that, and that's, to me, more exciting, in terms of improvements, than just more fishery officers, et cetera.

 So it's not to say that there won't be continuation of the funding, et cetera, but there will have to be a business case put forward with those kinds of considerations included.

- One more thing, Mr. Bevan, before I come back to you, Ms. Dansereau. You would agree, though, that trying to replace fisheries officers by, what I think it's called, intel, intelligence-led policing methods, has a cost in terms of compliance?
- MR. BEVAN: I think that that would be prejudging the And also, we aren't interested in sort outcome. of dramatic shifts of trying to do something all at once. These are the sort of things you should be testing before you look at any changing and funding. So it's not something you say, "I think I could put in this new process and save 10 people." That's a bad way to approach the business. The better way is to look at ways to improve compliance through different methods and you'll see what your funding requirements will be in the out years, but not to do it -- not to cash in any savings before you have a chance to do so -- do that kind of evaluation and make sure you've got compliance. Because what you don't want to do is have compliance problems caused by your changes and either not be able to track them or not be able to then reverse the approach and go back to the traditional way.

So it's an evolution, not a revolution. We're not looking at quantum changes, we're looking at continuous improvement in how we get compliance with the resources that we have.

Ms. Dansereau?

MS. DANSEREAU: If I can just add to that, and I agree with all of it, obviously, but the enforcement technologies will be one area that we look at. The other, though, are the policies that we are enforcing and how we're managing them, and that brings us to a management framework. And instead of policies that may not require the same kind of attendance for each boat, so I use, as an example, that might be useful for the Commission, the integrated groundfish management approach, which controls the bycatch, and I won't go into the details of that, but it allows us to manage within a fishery areas that would otherwise be required

to be managed through enforcement, and there are electronic monitoring systems that we know exactly what boat caught exactly what fish. So I think there are examples that we can use on the policy side to make sure that what we are enforcing makes sense, both from a conservation perspective and from an industry requirement perspective, and then there are the technological changes as well. And the go together and that becomes a management approach.

- Ms. Farlinger, you will have heard that some of the people closer to the ground think that having conservation officers on the ground is at risk and it's an important thing to try and maintain. Are you satisfied with the coverage you have compliant -- as conservation and -- here?
- MS. FARLINGER: A fairly broad question, but in general, the -- it's important for us, both on the management side and the enforcement side, to continue to work together and involve, in the way that both David and the Deputy have mentioned. In fact, over the last couple of years we've been working quite hard at making sure the management side, the science side, and the enforcement side are working more closely together to make sure that we're actually getting those connections and synergies.

I think the, you know, the question can always be asked, "Could you do with more fishery officers on the ground?" and I guess, of course, you always could, in the same way you could do with more policemen on the highways. But by and large, the enforcement has been done in a way that respects the priorities that we need to meet. And that means that sometimes enforcement effort's to be focused in one area and the next year they may be changed to another area. It doesn't mean, necessarily, that all areas are covered in the same way every year.

- You've heard the evidence of Mr. Bevan and the Deputy with respect to the need to do some testing, find out what works and what doesn't work. What are you doing in British Columbia to make sure that this new direction makes sense or to test whether it does?
- MS. FARLINGER: Well, I think if we were to look at salmon in particular, that there's a good part of

the PICFI program that is dedicated to looking at transformational kind of work. So what can we do about catch monitoring that is better and is modernized and takes count of the current context? Similarly, in enforcement, there has been a significant amount of resources, PICFI resources, put into building capacity and testing intelligence-led policing. There are certainly areas in co-management that we're testing and trying to move forward.

So that's part of the continuous improvement process, and one of the ways in which we use what we call B-base or additional funding is to test how we need to change and whether, in fact, it's more effective or not.

- Indeed, the Williams report in 2004 recommended that DFO must ensure that adequate resources are available and a budget and staffing available for enforcement be increased. There was, as a result, Williams funding in 2005, which, I think, became part of PICFI, all of which will sunset in six months. So if this is supposed to be transformational, I guess the question is: Has it worked? And the question is: If it is improving the next question is: If it is improvement enforcement, why is it being concluded?
- MS. FARLINGER: That's certainly part of what we would evaluate and are actively evaluating is as the program approaches its end, we're looking at all of the funds that have been spent and the activities that have been done under that program and looking at what our best advice would be to decision-makers about where we need to move forward with that, or how we would implement it into our day-to-day work.
- Q Let me just turn back to the question of the relative merits of officers on the ground and alternative methods of enforcement. Again, coming back to the evidence of Randy Nelson, he made the point that the biggest deterrent you can have is the presence of fisheries officers, and testified that, in his view, there is absolutely a connection between fishery officer presence and the degree of illegal activity.

Do you have any specific additional information that would suggestion anything other than the correctness of that view?

MR. BEVAN: I think that that view relates to what risks you are trying to control. If you're looking at fraudulent activities, having fishery officers on the ground may not be effective at all. What's more effective is having fishery officers conducting major investigations using datasets that come from a variety of sources. So that kind of risk is not something that is addressed through fishery officers on the ground.

What is addressed through officers on the ground is the kind of risk controlled by monitoring, control and surveillance, that would be poaching and those kinds of activities. But that's an expensive process. If there's an alternative to having other datasets collected, different policies, as the Deputy noted, different requirements to provide information to the government to demonstrate that your activities are consistent with conservation and are legal. If that's an alternative, then that's a more effective way of getting compliance than the boots on the ground analogy.

The latter does apply when you don't have datasets, you don't have the requirements for the landing, et cetera, that you might otherwise have, then you'd either put fishery officers there to influence behaviour during the fishery. And again, that's an expensive model. And the question is: Is that the only model, or is there a better way of making changes to get that compliance?

We all want compliance. And in the old model, if you're fixed on that monitoring, control and surveillance, you're going to need fishery officers. The question is, is there a way to get the right balance between that, the education, the shared stewardship, bringing the public and the participants and the fishery into the process of change and behaviour and getting the culture of conservation and do it in the fishery, and then on the major investigations you still have to have that capacity. So it's no matter what your risk is, what your strategy for dealing with risks are, and then that helps determine how many people you need on the ground.

So I think what Mr. Nelson was saying is that given the current method of management, the

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current practices, yeah, we need fishery officers. But the question is, is that the only way to get the compliance, or are there other alternatives? Mr. Bevan, you've been setting the two models sort

of against each other and stating it as a question

- as to we have to determine what's the better way 7 to do this. And I understand the generalities. 8 Can you direct us to any specifics as to what's 9 10 11 12
 - being done to get the answer to that question? What specific initiatives has the Department taken -- doing to evaluate current methods and comparing them with others? Are there some tests going on? What's going on? MR. BEVAN: Well, I can't specifically speak to what's going on in the salmon fishery here, but I know
 - that we've changed the way we've handled things in the crab fishery. We've looked at the effectiveness of monitoring, control and surveillance versus using datasets to do major investigations, and it was stark. We were not getting results the old way. We were getting results the new way. And we have a tremendous difference in our appreciation of the kind of activities that were involved in that particular fishery in Atlantic Canada. We've seen a more proactive approach with the groundfish integration in British Columbia, where we didn't have the problems with -- so much as compliance as with bycatch control. And that's another example of change.

In the salmon fishery, we need to reconsider whether or not we can live with a sales slip model - I don't think so - whether we can try to control it through monitoring, control and surveillance as the only way. That's dealing with individual interactions and not with the broader, systemic issues, and I think we need to look at the systems that are in place in salmon to try and change those to make the improvements. But I don't know if the --

- Well, I'll put that point to Ms. Farlinger. are you doing to test these alternative hypotheses?
- MS. FARLINGER: Well, as I mentioned, part of the PICFI funding went towards conservation and protection, specifically, to build capacity in what is called intelligence-led policing, which I think is sort

 of a general term for what David has just described. In addition, there have been funds and work put towards the examination of a share-based fishery in salmon and what the management and enforcement implications of that might be. Also, on the catch monitoring side.

And really, all of those things have to be considered together in terms of modernizing the management of the salmon fishery, including the enforcement. So there has been considerable work, and we're in the process of pulling all that work together, analyzing what has been done, did we meet all our objectives with the PICFI program, where we haven't met them, where should we go from here, and those kinds of things that really happen at the end of a program in terms of, is this ready to implement now, or is there more work required, or what will we do about it to carry it forward?

So on all three fronts I think there have been -- there's been specific work funded through this additional B-based funding, and we are in the process of evaluating that right now.

- Yes, two questions arising out of that. Can you be more specific about the process of evaluating, particularly the conservation and protection piece? Can you be more specific about what you're doing to evaluate the technologies, which I gather you've -- I think I heard you say were being encouraged by PICFI funding?
- MS. FARLINGER: Well, on the conservation and protection side, and I should say it varies across those three elements, on the conservation and protection side, we're working with national headquarters' C&P folks. As you may have heard, the director general of conservation and protection is currently running a process looking at modernization of C&P, and the results from Pacific region work will be going into that process. I believe it's called C&P 2012, and so I do think it's very much anticipated that the results of that evaluation, in which we are participating, will be available in 2012.
- Q Have you made a report to national headquarters on this topic?
- MS. FARLINGER: It's more a case -- there are reports involved, but it's more a case of bringing information together and working through the

challenges, the information and the problems, to come up with something to implement on an ongoing basis.

- Q So if I understand, there is an evaluation going on nationally in which British Columbia is participating, but am I correct -- would I be correct in saying there's been no -- nothing provided to national headquarters about this evaluation? Is it being looked at through a rigorous program where you're making comparisons and trying to draw conclusions as to what works and what doesn't, or is this just in the stage of general discussion?
- MS. FARLINGER: As I understand the national process, that there's been considerable work over the last three or four months, and I believe there's a national meeting next week and -- when various officers from various parts of the organization are coming together to evaluate the issues and to provide the regional perspective on that evaluation and analysis.

I think because, at the regional level, we have looked at the work that's been done under PICFI each year and we ask for progress reports, and those become part of that broad evaluation. So I think the answer that you may be looking for is, is the evaluation is very much an ongoing process, it's a participatory process, and one that will come out with documented decisions at the end of it.

- In the meantime, what's happening on the ground? Is the Department committed to maintaining the current level of enforcement, using conventional methods until the new ones have been proven preferable?
- MS. FARLINGER: I think the process of looking at new methodologies, whether it's in fisheries management, whether it's enforcement or other things, is a combination of continuing to provide set priorities and provide the best service on the ground while testing new or evolving kind of methodologies and systems, and I think it's very much looking at, will share-base management, if we put it in place, affect enforcement? Will the new methodologies enforcement mean that we need less fishery officers on the ground? And in the meantime, the fishery officers continue to do the

1 work according to the work place for 2011/12.

- Q Is the funding in the next fiscal year for C&P at risk in this region?
- MS. FARLINGER: Not to my knowledge, but you've heard from the Deputy that the Department is undergoing an overall review of our processes.
- Q Thank you.

- MS. DANSEREAU: If I may, again, it depends on your definition of "at risk". Is the program at risk for enforcement? No. The level of funding is something that we will discuss according to priorities and according to new directions, as you've heard from both David and from Sue. So the program is not at risk. The level of funding may change.
- Q By "change" you mean be reduced?
- MS. DANSEREAU: Or, who knows, there might be -- it might be identified that some areas need to increase as well. So this is really a -- truly a balancing of priorities which can, where possible, shift funds to areas of greater priority.
- Thank you. I have one quite specific question here arising from the same area. Can you tell me, Ms. Dansereau, or anyone, what the -- how much money did conservation and protection receive in response to the Williams report? There seems to be some conflict in that on the record?
- MS. DANSEREAU: I was not there, so I can't speak to this.
- Q Mr. Bevan?
- MR. BEVAN: I was there, but I can't recall the exact number, and I would be loathe to say one. One's popping around in my mind, but I can't verify whether it's accurate, so I don't have that off the top of my head.
- Q Is that something that you would be able to determine for tomorrow?
- MR. BEVAN: I think so, yes.
- Q Thank you very much. One of the issues that arises, I think, in the context of the operational and strategic review is the -- finding other people to do things that DFO does and offloading some of its responsibilities. In one of the issues, in one of the areas where this arises in catch monitoring, in the Williams report in 2005, the observation is that:

September 22, 2011

 Accurate [catch monitoring] is one of the core responsibilities for any credible fisheries management agency. Simply put, if harvest levels, including all mortalities, cannot be accurately estimated, fisheries cannot be carried out without significant risk to the stocks.

At the time Bryan Williams heard that, heard testimony in the B.C. Interior, there was a:

...wholly inadequate situation regarding catch monitoring...directly attributable to continually declining and uncertain levels of funding.

That was in 2004. Now, in 2011, Mr. Jantz gave evidence here, he's the area chief of the B.C. Interior, that catch monitoring there relies significantly on B-based PICFI funds that are not expected to be continued after next March, and that even at current levels he does not have full coverage of the fishery in terms of geography or duration.

So if catch monitoring is so important and is one of DFO's core responsibilities, why isn't it more stably funded? Ms. Dansereau?

MS. DANSEREAU: I'll answer part of that, and obviously David and Sue can answer other parts. But I want to go back to one of the first words that you used, which was "offloading" of our core responsibilities, which we are not doing. We are defining, as governments always should, what are the core responsibilities of the Federal Government and of the Department. Often what will happen in a department that's as old as ours is we can have mandate creep and we start doing things in decentralized organizations that we probably are doing too much of some things and we need to pull some of those back and exercises, such as strategic review and the deficit reduction action plan, or strategic and operating review, do exactly that, they force us, and rightly so, to go back and look at what we are doing and to ask the question, "Should we be doing this? Is that really our responsibility?" And where things are not our responsibility, but they are important to

Canadians, we hope to be able to find ways to continue to have that work done somehow.

So whether or not all monitoring is equally important in all rivers or in all fisheries, I don't think we can categorically say, "Yes," but clearly monitoring is going to be important, regardless. So I'll let David speak more on the specifics of the question, but I need to make sure that we don't appear -- we're not offloading our responsibilities.

- Just to be clear, Ms. Dansereau, are you suggesting that contrary to what -- the words in the Williams report, that accurate catch monitoring is one of the core responsibilities of any credible fisheries management agency? Are you questioning --
- MS. DANSEREAU: I'm not questioning that, no. O Okay.
- MS. DANSEREAU: No, not at all. I'm questioning -- it was --
- So then, when you're speaking --
- MS. DANSEREAU: -- the very beginning of your statement was that we are planning to offload some of our core responsibilities, and I was saying, "No, we are not doing that." Now, whether or not everyone would agree that monitoring is core in every single area that we are, I don't know the answer. I would be seeking advice on that. But I'll let David answer to the specifics.
- Q The evidence we have is that it is, to some extent, in any event, being covered by B-based PICFI funding, which is sunsetting in 2012. So just focusing on that fact, what is your response?
- MS. DANSEREAU: If I may, we've heard a few times this morning the idea that because something is sunsetting it will disappear. And the approach of sunsetting and D-based money, I realize that for some people in the bureaucracy it's nervous-making for them, that programs are time limited. But, in fact, what time limited money does is ensure that at a certain point there is a serious evaluation of the usefulness, the utility of all the elements of that program, and if they're no longer useful, they should stop being done.

So it's almost a mini strategic review of each program as it reaches its end point. Some are truly designed to be five-year programs and

come to an end; others are designed to be reviewed and for us to go and seek additional funds to either continue -- discontinue some parts or continue some others. So we have no position, at this table, at this point, that the money is either going to be there or not be there.

As you've heard from Sue Farlinger, we are in a review of all of our sunsetting programs, and we will be determining from those which are the elements that ought to go forward, maybe with increased requests for money, and which we could potentially do without.

- Mr. Bevan, do you have anything to add on the catch monitoring issue?
- MR. BEVAN: I think I'd agree, obviously, that catch monitoring is an essential component of management of fisheries. Having said that, I don't believe that it's the responsibility of the organization such as DFO to do it, that is to say, to cause all of these things or to actually collect the information directly from the landings.

What it is our responsibility, is to ensure that it is done, and in many fisheries, for example, we have hail in/hail out provisions where you're going out to fish, "What did you catch and what are you saying you caught?" You have to declare what you're catching, then you have to land. It has to be dockside monitored. It has to go through, sometimes, observer process as well. All those datasets are then compared amongst themselves so that we can make sure there's no anomalies. An observed boat should not have a different catch than an unobserved boat.

And the fishermen, in those cases, pay for the observers. They pay for the dockside monitors. They pay for the hail in/hail out calls. They often pay for the vessel monitoring systems, etc. That's their responsibility to give us the information we need to ensure that the stocks are sustainably managed.

And clearly, in some fisheries, we don't need to go that far, because the risks posed by the fisheries relevant to the biomass is very much different, so we need to know the scale of the fishery. If you have a small, recreational fishery on an abundant stock, you just want to make sure you have an idea of what ballpark you're

in. You don't need to go down the point of imposing very significant costs on participants if the risks don't warrant it.

That's the kind of call we're going to have to make in terms of interior fishing. If there's high risk, we're going to have to find a way to get that information enhanced. If the risk is low, because the period of the fishing is not a significant contributor to the overall mortality, then you don't have the same level of obligation to impose those criteria on the participants.

So it's a matter of what's the right balance, given the circumstances, but you do need to have enough information to know where you are relevant to the ability of the stock to withstand fishing mortality and what that fishing mortality is. But I'm not sure that we should be the ones who actually collect the information; we should be the ones who get it from the participants and from the various people who can provide alternatives, whether it's an observer or a buyer or whatever, and that information has to be made available to us in a useable fashion so that we aren't getting information a year afterwards in a sales slip but, rather, getting information in real time.

And we've seen tremendous changes in compliance in a number of fisheries, as we've moved to that kind of model where it's the obligation of the fisherman and the participants to tell us how they're going to demonstrate they're in control and that they're compliant with the requirements. It's a reverse onus of proof in those cases. It's not our obligation to prove them that they are out of control, we do that in court, but on an ongoing basis it's their obligation to prove to us and the market and the Canadian public that their harvest is sustainable.

- Q Would you agree, though, that to the extent the monitoring is being left to the monitored, you need to have a very robust system of oversight and audit of what they're doing, and that's not going to be cheap, either?
- MR. BEVAN: Well, the monitoring, in those cases, is not left to the monitor. The monitoring is paid for by the participants. They pay the dockside monitors. They pay the observers. They pay the costs for the transponders. They pay the

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transmission costs for giving the data, et cetera. So they pay the bill and we do the auditing, that's correct. And the auditing does have a number of ways of being made more effective. If you have different datasets from different independent sources, you've got to -- an ability to do the comparison.

Clearly, in the river system, when you're dealing with an artisanal FSC fishery or something of that nature, you're not dealing with something where you've got a group of people with the capacity to run elaborate systems, then we're going to have to take a look at how those harvests could pose a risk to the stock, or not, and what kind of level of control we need on them. But it's not the fox guarding the chicken coop; it's the participants paying for an independent monitoring process.

MS. FARLINGER: I think I'd just like to add that part of the PICFI funding went in two directions, one is to the Integrated Salmon Dialogue process, which addressed the issue of catch monitoring from the stakeholders' perspective and First Nations' perspective, as well as the catch monitoring strategy, the development of previous work, taking it out to various groups, including First Nations, recreational and commercial fishermen, and environmental groups, and looking at exactly how DFO would establish standards. And I think you have heard from Colin Masson on that, about the report and the work that he's done under the PICFI funding, and the catch monitoring strategy that now has been out for consultation for, I think, almost a year. And that catch monitoring strategy does for the Pacific Region and all the fisheries in Pacific Region just what David says. It looks at the fishing power, it looks at various elements related to effective fisheries management and how you have to set standards for different kinds of fisheries, different fishing power, different situations, mixed stock situations and other things, so that DFO is in a position to do its job to set those standards. And so I would say that we're quite advanced on that work.

We did, in the interim with PICFI fund catch monitoring in the Upper Fraser that Mr. Jantz referred to. And part of that catch monitoring

strategy is both to inform us internally about the kind of risks that David talked about, but also to inform stakeholders who quite frankly to date have spent more time pointing fingers at each other than they have in working with us to develop catch monitoring standards. We have exceptions to that, which I think have been noted along the way. this is partially a social and education process, which is really letting all the stakeholders know that the same criteria are being applied to developing their management standards, and to setting priorities. And therefore to take the work that we do bilaterally with any group or First Nation and put it into this framework so that people understand why the catch monitoring standards are there. That's sort of a really important social step that has been a very big part of the development of catch monitoring in PICFI.

Coming back to one of the points we've been discussing earlier, the reporting and the monitoring is to be done by the fishers, the monitoring is to be paid for by them, and the auditing is the responsibility of DFO is kind of the structure that I understand from the evidence from what I've hard this morning.

One of the issues that was identified again by Mr. Nelson was that C&P has concerns as to the accuracy of catch reports, and he testified that fishery officers have provided illegal catch information to resource managers, but that information has not been used. He also noted that fishery officers are not regularly involved in auditing catch reports. Do you believe that fishery officers should be involved in catch auditing, given their powers of search and inspection, Mr. Bevan?

MR. BEVAN: I'd say that, yes, they should be involved in the catch auditing, where that's a priority for that particular set of risks in that particular fishery. They need the right tools. If the tools aren't there in terms of getting the information datasets, then how do you audit if you're waiting for a year for sales slips and information and paper. That's not a very effective set of tools for fishery officers. So they need the right tools. That's something that has to be worked on

with the catch monitoring system, and fish managers.

The other issue is what's the estimate based on, what kind of data did they have, and how much risk was posed by the additional catch, and was it something that would require priority on the other side of the house, the management side. think salmon is not in the best situation in British Columbia, relevant to especially the Fraser River, given the number of participants, the kinds of fisheries and the systems that have been in place in the past, versus what we think is needed in the future. But there's work underway to change that, and it is a challenge, no question about it, when you're dealing with so many groups and particularly when you're dealing with groups exercising an FSC right, and they don't have a lot of infrastructure, et cetera, for these things. If you're dealing with commercial groups or recreational groups that have more resources, then there is the potential for having a much more or quicker transformation to that new model.

So I agree that there should be some work done on auditing, but there needs to be the right set of tools, otherwise the task becomes insurmountable for the C&P folks. And does it become a priority for them if they don't have an outcome? Because that's another issue that we ask them to do is don't spend resources where you're not going to have an outcome to control the risk.

- Q And as I understand at the moment the catch monitoring audit piece is not something that the fisheries officers are doing. Will they have the resources to do that?
- MR. BEVAN: Again, that's not resources. What it is, is tools, and tools don't mean more money. Tools mean that there has to be a system of catch monitoring in place that provides fishery officers with the information that will then allow them to be much more focused. So it's not more fishery officers doing a bad system, it's the fishery officers getting the tools to a better approach, and getting better outcomes with the resources they've got.
- Q But as I understand it, this is a job which they're not currently doing. If we're asking fishery officers to add that to their

responsibilities, do we not need more fisheries officers to do that?

- MR. BEVAN: No, what we need is to follow up on the work that was described by Sue Farlinger about the changes in the catch monitoring so that we'd provide the tools to the officers so they can get an outcome, they can get compliance, they can get what they need, without having -- you know, we could solve this problem if we had a fishery officer at every landing point 24/7. We could definitely solve the problem. We turn them into catch monitors, and we take a highly trained, expensive-to-put-in-place public servant, and turn them into somebody who's not exercising the whole suite of skills they've got. So that's not what we want to do. We want to have a different approach so that the officers can get the information they need to use for investigations.
 - Ms. Farlinger, you agree then that having fisheries officers and the C&P and catch monitoring programs more closely aligned is a good thing to do?
- MS. FARLINGER: Yes, I do.
- Q What about Mr. Nelson's observation that there's not enough resources now among fisheries officers to do that?
- MS. FARLINGER: I think the idea that using the resources we have in the most effective way is the answer to that question, and I think as Mr. Bevan mentioned, Randy may have been thinking very much in the traditional on-the-ground fishery officer way of doing business. And I think the reality is, is we're looking for the balance between having people on the ground and doing this other kind of more sophisticated work, and the kind of catch monitoring systems on the stock assessment and the fish management side that make all that work together for more effective monitoring. And I think much of the work that we've done in PICFI is aimed at doing exactly that.

And also the reorganization in the Department of having all the operational programs in a single grouping and better coordination of the work planning, rather than a rather more traditional model of siloed work planning, is the kind of things that — are the kinds of things that will allow us to in fact find that right balance. And

it will always change. It will always be one fishery or another that is more problematic because of fish abundance, because of some other problems. And we need to maintain that fluid balance so we can deliver the best possible monitoring.

- As I listened this morning, I get the sense that you believe that there's a better way, but how that all works is still undefined and the Department is working on that. And I've provided some snippets of evidence from people on the ground saying no, we need more people on the ground, good old fashioned stuff. And I guess that raises in my mind, well, what if these new ideas don't come to fruition, what do you do in the meantime.
- MR. BEVAN: Just on a national perspective, I can definitely tell you these ideas are not necessarily that new, and they do work. been proven. So where we've introduced these procedures in different fisheries, the officers have had a much greater ability to get at compliance issues. They spend a little less time in the field and they spend more time in front of computers, but the outcome is a much greater accountability on the part of resource users and the people out there on the water doing the fishing. So we've seen that this actually is a very well-proven way of getting results. challenge is that it's -- is fitting these kinds of ideas to fisheries where you have myriad participants and not a lot of resources on the part of some of those participants to take on these responsibilities to provide that information through a third-party service provider. So that's the challenge.

It's not so much are these concepts workable; they work. They've been proven in Canada and around the world. They do work. The issue is how do we improve the situation to deal with risks that may exist in the salmon fishery, and not to do it by, you know, we've done this in the past, we've put lots of people on the river, and we've had problems in terms of cost of that, relevant to presence elsewhere, and I'm not sure we got the results that would warrant -- in other words, it's a very expensive option to have compliance through

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continued day and night presence. We need to find a better way to do it. We know there are better ways, and it's a matter now of identifying the risks, which areas do we have the fishing power that compose the risks to the stocks and change those on a pilot and priority basis.

MS. FARLINGER: So just to try and answer your question, I think that to put it most simply in fisheries management, if we are not confident about the monitoring or getting the kind of information that we need as a responsible manager, what we do is decrease access to the fishery in order to be more conservative. I think that's a useful general statement.

I think that speaks to the evolution of the integrated groundfish fishery that the Deputy referred to earlier, where the fishermen were cognizant of the benefits, both for their own operations and for marketing in terms of being able to demonstrate the sustainability of their fishery, in that they were dealing with what in salmon we call the weak stock problem, and in groundfish we call the bycatch problem. Those fundamentally are things that drive how a fishery gets managed.

So really what we're talking about here is taking things that are already in play. piloted demonstration share-based fisheries in salmon over the last five years with the resources. We've taken a look and are in the process of taking a look at what that means. we get better reporting? Did the fishermen get higher value? Were there processing advantages? Were there solutions to allocation problems? the suite of fishery management questions that you ask, and then ultimately, were we better able to meet the conservation targets while still providing people with the access to the fish? those are the kind of fundamental questions that we're asking ourselves about the salmon fishery and all other fisheries. And as David said, in some fisheries in Pacific we have moved ahead, in some in the Atlantic coast we have moved ahead, and we're continuing to try and work our way through those exact challenges in the salmon fishery, which is very complex.

I may come back to this, but for the moment I

wonder if we could move on now to issues of habitat monitoring and compliance. In the DFO's 1986 Habitat Policy, it states there, there's a guiding principle there should be no net loss of productive capacity of habitats. We've heard from Jason Hwang, Area Manager of OHEB in B.C. Interior, that from the operational level all indications are that DFO is not achieving no net loss. Patrice Leblanc, Habitat Management, Policy and Practices Branch said that DFO has no true measure to assess whether it is achieving no net loss. Would you agree that DFO is not meeting its objectives under the Habitat Policy and achieving no net loss?

- MS. DANSEREAU: I would say that the first part of the statement is the one that is critical, and that is that no net loss is a guiding principle, as opposed to necessarily a metric that was ever intended to be measured on a centimetre-bycentimetre for habitat. I would say that we have areas that we can certainly improve on, but I don't think that the intention was ever that it would be that categoric. We are, as I think you know, looking at how to improve the system by taking the principle of no net loss potentially to a ecosystem base, rather than a project-by-project base, to allow us to achieve the intended outcomes, which is to make sure that the fish have the habitat that they need in order to survive and to thrive.
- Q Since I'm not sure I understand the answer, Ms. Dansereau, are you saying it wasn't intended to be a policy that's measurable? I'm not quite sure I understand.
- MS. DANSEREAU: I don't think any of us at this table were actually here for the drafting of that policy in '86, but...
- Q It is still the policy.
- MS. DANSEREAU: It's definitely still the policy definitely still the policy and it has been over
 time translated into meaning that it is no net
 loss centimetre-by-centimetre of habitat. And I
 don't think, and no one has told me so far that
 that was the original intention. That is a
 guiding principle. It would be the original
 intention was to make sure that the fish have the
 habitat that they need in order to survive and to

thrive, and that is still the intent that we try to apply. So I can't speak to what the intention was in 1986, I can say how (indiscernible - overlapping speakers).

- Q Well, but let's look at it from today. How is it being interpreted, what is it that the Department is doing, and I'm not quite sure how is success, how is meeting this policy to be measured?
- MS. DANSEREAU: We do at this point take the approach that it is for every piece of habitat loss and every piece of habitat must be created or we find some way to compensate. And we are doing it at the project-by-project -- using the project-by-project approach.
- Q So you're seeking to do it at the present, but...

 MS. DANSEREAU: No, we are, in our authorizations we seek -- well, we seek to do it within our authorizations, yes. We are not, I think we can all say, as proficient at going back and monitoring to make sure that every project that we approved actually resulted in the protection that might have been required. So we are in continuous -- in this as in all things, in continuous mode of trying to find better ways to do that, and better ways to actually achieve protection for the fish, which is what the intent of this is.
- Q What are you doing to address the fact that you're not properly auditing the application of the policy on a project authorization basis?
- MS. DANSEREAU: Well, it's a big country and there are very -- there are many levels of projects in the country, and so those projects that are of greater magnitude, both financially and with the environmental impact, will receive greater attention both in the analysis of the project and its impacts, and in taking a look at it over time. So some of the smaller projects, it's true, we will not have -- again, we will not have the resources to go back and take a look at all of them. But again it's a risk-based approach to determine which projects pose the greatest risk to HAAT fish, and they will require -- they get greater attention than those that pose a lower risk.
- Q And so would it be fair to characterize the state of the policy and it's application today that it's applied on a project-by-project basis where

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authorizations are required and the larger the project, the more likely it is that the results will be audited.

- MS. DANSEREAU: I would say that that's true, but Sue can speak more from an operational perspective, but I would say that that's true.
- MS. FARLINGER: We do have resources in terms of monitoring habitat, but part of the program renewal that we're working on is to look at how in fact can you measure this in a way that can be reported back to fishermen, to environmentalists, to Canadians, and the whole idea of expanding out to an ecosystem approach, perhaps in this instance, a watershed approach, really we hope will give us ways to develop monitoring on a broader scale that will help us report to ourselves and to the public about how effective the habitat program is. And that's really one of the focuses of the renewal in terms of taking a policy that was developed in 1986, which all of a sudden has become an expectation that we can measure and now modernizing it and saying what are we going to do with this program that we can measure, and we can report back, and demonstrate just how DFO programs are protecting habitat.
 - So I think the two cases of this, as I understand what you're telling us, it's only applied on an authorized project-by-project basis, and you are trying to figure out to apply it to an ecosystem management, broader, not simply a project basis, so it's -- you would agree that it's not being applied in that broader way.
- MS. DANSEREAU: I don't think I would go that far, and I don't have the evidence to support that kind of a statement. I do think what we have been doing is since 1986 is with great thought and concern by a lot of people in the Department, long before I was ever there, giving due consideration to what the fish required in their habitat across the board and not -- and so whether or not the specifics of no net loss were met on a case-bycase basis, I don't think we can say, and I don't think we would say.

But the principle that the policy was trying to address, which is to ensure that the fish have a sound habitat in which to survive and thrive, that principle is very much alive and well in the

Department through monitoring, but also through a project-by-project approach. Yes, we would like to expand it out and make it broader, but together, if all of the people are of like mind that are working in this program, they do end up with an ecosystem approach, ecosystem-based approach.

- The 2009 report of the Commissioner of Environment and Sustainable Development recommended that DFO determine what actions are required to fully implement the 1986 Habitat Policy, and confirm whether it intends to implement all aspects of the policy. And DFO's response in 2009 was that by March of 2010, it was committed to -- it was committed that by March 2010 it would determine what actions are required to fully implement that So that commitment was made in 2009, and policy. the evidence we've had, and I think it's consistent with what you're telling us this morning, is that you're still working on renewing and improving and applying this policy. Why has this taken so long?
- MS. DANSEREAU: It's a complicated policy, and it's, as I said before, it's a big country. We have many types of ecosystems, many types of projects, many types of expectations from the policy and from the Department. So it was, I think, overly optimistic for us to think that we could have finished by 2010. It will take us another little bit of time yet.

And I actually think that these kinds of statements should have a broader endpoint because they should always be under review. We should always be looking at how we do things and whether or not we can improve on what we do. And so there will never be a point, in my view, where we've actually reached nirvana and know exactly what the perfect answer is.

- Q However, there was a commitment made -- MS. DANSEREAU: Yes.
- Q -- and so can you be more specific about when you intend to meet that commitment?
- MS. DANSEREAU: We're working very hard on this with staff across the Department, and we have not yet even begun consultation, so we would have to have some consultation on this. But our hope is to have -- and I say a hope, I can't say a firm

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definitive, because there are other factors that affect our timeline, but I certainly hope that by this time next year we have a new Habitat Policy. You have a new Habitat Policy.

 MS. DANSEREAU: Mm-hmm.

So that's not the -- that wasn't the commitment, I think. The commitment was to report on where you were on implementing the existing one, by March 2010 determine what actions we need to fully implement the Habitat Policy.

MS. DANSEREAU: Well, no, but through this work we're confirming whether it intends to implement all of this, and that all of that leads to research into what parts of this we ought to be continuing, as I said earlier, and what parts of this we should be doing a little bit differently, and that's part of that.

So by September of 2012.

 MS. DANSEREAU: As I said, I hope; I can't commit.

We've heard that -- one of the aspects that you've alluded to is the monitoring of the habitat by a -- on a project authorization basis, and perhaps are there some attempts here to streamline, build efficiencies into the habitat monitoring program this way?

MS. DANSEREAU: Yes, there are, but there's also an attempt to —— mostly there's an attempt to priorize it. So there are some areas that the fisheries are not either iconic, culturally or economically, or otherwise, as in other parts of the country, and the risks to their fisheries by certain activities are not as high as they would be around Fraser sockeye, for example. So by Fraser sockeye will always have a very high place on the priority list, and who knows, at the end of this process whether or not more attention would not be placed on the habitat requirements for the Fraser sockeye, as then other fisheries that the habitat is much more stable and the impacts are not quite as meaningful.

So again it's a question of priorizing to make sure that we are putting our resources in the right places, and having a risk-based approached, so that we're not using the same level of resources for activities that have a much different risk profile.

Q One of the -- remind me, the Environmental Process

Modernization Plan I think is the -- MS. DANSEREAU: Mm-hmm.

Q -- code word for looking at - wrong expression - is the program by which the major projects are identified and voluntary reporting is in place for smaller projects, is that...

- MS. DANSEREAU: A little bit. There are two or three program areas, one is the Major Projects
 Management approach, which is for very high risk projects, and a lot of attention is placed on them. I think -- I don't normally use acronyms, but unfortunately I know this one by the acronym, the EFMP, is a program -- pardon?
- Q EPMP.

 MS. DANSEREAU: EPMP there you go is a risk-based approach, is work that was done in the mid 2000s, I think, to start the process of taking a risk-based approach and working with proponents on projects so that they had the information that they needed in order to make decisions that would result in not creating a harmful alteration to the habitat. So that's the beginning of a risk-based approach, and we need to continue in that line of work to make sure that we're putting our resources in those areas where there's the greatest likelihood of us making a positive difference.
- Q But is it not correct that one of the impacts of this that smaller projects are now carried on below DFO's radar?
- MS. DANSEREAU: To some extent, yes, but we, as I say, we have materials that people are supposed to be using and are using to make decisions on the kinds of projects -- on the project that they will implement. And we do some monitoring, and Sue, I think, can speak much more to the implementation of that. We think it's working.
- Q But before you answer that, Ms. Farlinger, just to put it into perspective, we've had some, again, evidence in this case from Mr. Hwang with respect to some of the implications that he sees from the voluntary reporting, that there has been a remergence of unsustainable practices on foreshore development, and where previously there has been some control. And I guess there are issues of overall impacts for a number of small projects, and that essentially I think he's saying it's not working well at that level. Can you comment on

that?

MS. FARLINGER: I can. I think the intention is fairly clear, which is to set out the information for people who are working on and around water to tell them how to do a project in a way that wouldn't have an impact on fish habitat. And with experts like Mr. Hwang and his staff, that they focus their efforts on those projects which are more complex, and which in fact will have an impact and therefore, you know, require more analysis and work with the proponent in terms of how to not only avoid those impacts, but if they have them how to mitigate them and compensate for them.

And so I do think that there has been a shift, and there also has been a more recent shift in terms of monitoring resources to go back and take a look at this, that public education and information and whether it's being effective. And I think that is part of the reason, not only the report of the Commissioner on the Environment, but also taking a look at the program to make sure we've got that right balance, again between monitoring — if we have a system where we're setting standards and monitoring becomes more important, we need to make sure that the program balances there.

So I am quite certain that there are areas where there is more activity, and our question is how do we adjust our resources of our habitat biologists and technicians time, and in fact fishery officers, where they're required, to make sure that those standards are being met.

And I can't comment specifically on Jason's experience on the ground, but I do think it is an ongoing challenge. There's more and more activity all the time, and really our challenge is to adjust this system so that we are doing the required monitoring so that people meet the standards, rather than having each and every project monitored or audited specifically by a habitat biologist. So once again it's a balancing to get the best effect, but there are more activities going on each and every year in Habitat.

Mr. Bevan, does this major project approach account for the cumulative risks that come from a lot of small activities, and is there any way that

the Department is addressing those issues? MR. BEVAN: I think it's fair to say there's about \$300 billion in planned economic activity in Canada. It's huge. There's vast numbers of small projects underway, et cetera. We've seen through the use of standards and through the use of class authorizations we've been able to reduce our play on proposals from about 12,000 a year down to 7,000, but the workload is just exploding. the old method of dealing with proponents and just talking to them about their plans and not going out and looking for compliance, not monitoring the effects, et cetera, that's not sustainable and that's why we're looking at re-evaluating things. But one of the things we want to do is set more standards and have that available for Canadians to use. And for example, when you're building, you have a building permit. You get that from contractors, et cetera, you don't necessarily -you get that process to get your process underway, and we want to have something similar.

We don't think it's the best use of time to have us looking at plans, and then not looking at the environment. That doesn't seem to make a lot of sense. So what we want to do is evaluate whether we can use more of these class authorizations linked to standards and linked to clear description to Canadians of what they need to do to comply with the **Fisheries Act**, and then having more monitoring to ensure that that's in fact taking place.

It's a huge challenge, and I mean, I think that the easiest way to stop any kind of degradation is to stop all human activities. That's not a very practical alternative, and I think we're going to have to look at what we are facing in terms of development of and society's need for a balance there to keep the ecosystem in a sustainable state, as well as allowing people the freedom to move ahead with projects. We need to do that by giving them better understanding of the rules, and to have better follow-through on projects.

Q A couple of points. Firstly, I don't think anyone would diminish the significance and difficulty in the task. And as I understand the process, you have obligations to get authority for large

projects as a voluntary compliance with smaller projects. And as you pointed out, there's not much monitoring, and I haven't heard anything about someone looking at the cumulative impacts. So my first question is, is somebody — is there someone assigned to look at this issue from the perspective of the cumulative impacts of all of this myriad of human activity? Looking for anyone who can answer.

MR. BEVAN: No, because I think that the part of what was described in terms of how we're looking at the policy is the current policy is based on project-by-project, no net loss, net gain kind of thing, and your question is not answered by the current policy. What we need to do is look at how we're handling ourselves in regards to management of the impacts on habitat and to find a way of going forward. Because if you look at what we're doing right now, the answer is we don't have -- the cumulative impact is not being looked at. We're going to have to look at a different way of approaching things if we're going to have better understanding of that.

We are obviously looking at trying to preserve fish habitat, and avoid negative impacts from major projects, and providing people with the tools to not have a negative impact in putting in their wharves or their foreshore of their properties. But that's going to have to be further developed on our part, and we need to look at how to shift some of our resources from that into monitoring.

- Q Okay. Ms. Farlinger, perhaps you can answer the question, the other point which I think I hear people saying is not up to scratch, is in monitoring the impacts of projects, even where authority has been granted and conditions have been put on it. Can you comment on the quality of the monitoring and your capacity in the region to do it?
- MS. FARLINGER: Well, since early 2004 we have had more resources added to the region to do monitoring. We have worked with C&P to delineate the roles and responsibilities between the habitat monitors and C&P, so there have definitely been improvements in that area. But the larger question really, is no net loss a metric that can be measured. And if it

 isn't, what is, and how would we then measure our success and be able to report back on it. So I think that's very much a part of the thinking in terms of the whole program renewal and the review of the policy. So I think I would say, yes, we do monitor, but is it enough? No, and that's why we need to take a look at it. And really even to be able to understand at what scale we should be measuring that to report success of it.

- Thank you. Mr. Bevan, I wonder if I might ask you a related question, which is your relationship as a Department with Environment Canada. What is your understanding as to whose responsibility it is currently, yours, your Department's or Environment Canada's to research and monitor for contaminants and their effects on Fraser River sockeye?
- MR. BEVAN: I think I'll turn this over to the Deputy for a more complete answer, but clearly the s. 36 has been the responsibility of Environment; s. 35 the responsibility of DFO. That's the simple answer, and I know there's much more completeness to an answer, I turn it to the Deputy.
- Q Ms. Dansereau?
- MS. DANSEREAU: Thank you. Yeah, it is a complicated situation and it is a decision that was made as we call it in our language, the machinery world, as the machinery changed, made in I think it was the mid-1990s, to transfer responsibility from DFO to Environment Canada. However it wasn't a -- I think there were some areas that were left unclear in that transfer. And so the Deputy Ministry of Environment Canada and I are working our way through that right now, obviously with recommendations that we will be making to our respective Ministers to see the best way to -- with the resources that we have to achieve the objectives that we need to achieve, or that s. 36 is trying to achieve.
- Q So then I take it you accept that it's not clearly out of your hands to look into the monitoring and research, and I'm being quite specific here, monitoring and research and contaminant effects on fish?
- MS. DANSEREAU: I wouldn't say that it's not out of our hands. It is out of our hands, but there were pockets in the country when the transfer was made

where we retained some of the responsibilities, and that is what we're looking at right now. But the transfer has been made. Funds were even transferred over. But there were areas where by mutual agreement, I think, and back in the time when this was done, where there was mutual agreement for us to continue doing some pieces of the work. And that's what we're looking at now to see really where the responsibility for this should lie.

We have an Exhibit 980, "Strategic Review of Toxic Chemicals Research" which was prepared in 2003 by DFO, and at page 2 it says:

DFO's mandate states that it is responsible for policies and programs in support of Canada's economic, ecologic and scientific interests in oceans and inland waters, and for the conservation and sustainable utilization of Canada's fisheries resources in marine and inland waters.

And I emphasize this:

Conservation and protection can only be achieved by understanding how all anthropogenic and natural stresses, including the introduction of toxic chemicals affect the ability of aquatic ecosystems to withstand these stresses and the capacity of fish habitats to sustain the production of fish.

The overall objective of the Department's toxic chemicals research has been to determine the effects of toxic chemicals on fish, fish habitat, aquatic ecosystems, and human use of...aquatic ecosystems.

Are you saying that that's not part of DFO's mandate?

MS. DANSEREAU: I think Laura would be better placed to address this, a purely scientific question such as this. But I'm not reading these paragraphs to mean that we should be doing the actual monitoring of the toxic substances, which I think is where the management or the enforcement which is where

- -- that's a different question than whether or not
 we should be studying whether or not the toxic
 substances will have an impact on the fish. So I
 read this more as science and research rather than
 enforcement and monitoring.

 It seems to be a direct link between the two,
 - Q It seems to be a direct link between the two, isn't there, between research and monitoring on this particular (indiscernible overlapping speakers).
 - MS. DANSEREAU: I'm not sure, it's a little as David described before on the catch monitoring, it's not that -- it's not necessary that we actually do the monitoring, it's important that we have the data. And in the federal system we do share data. So if there's data available through a monitoring system, it doesn't matter if it's DFO that does it, or if it's Environment Canada.
 - Yes. So I take it that you accept that the research is DFO's responsibility, but that doesn't necessarily mean that monitoring for contaminants in anadromous fish is DFO's responsibility.
 - MS. DANSEREAU: I would say that's true, and again it's a matter of the Department's making sure that we get the maximum work with the best utilization of resources. So Environment Canada may be better situated to do some of this, because they do it for other reasons, as well. They do some of this for human health, and some of it for other factors. And so if they are developed -- if they are getting some data, then we would use the data for what we need.

Now, whether or not I would agree that we --that this is a priority for this year, I think in
a general sense, yes, but if -- I don't know how
it fits with our overall Science program. But I
do know that if we wanted to understand fish in
their ecosystem, it's important for us to
understand this, as well. Whether or not even
that is a core function of our Department, as
opposed to getting the research from somewhere
else, some other scientists having done that, it
would be something that we would be looking at.
So the knowledge clearly is important to us. how
that knowledge is generated is something that we
would look at.

MR. WALLACE: Thank you. Mr. Commissioner, I see it's come to be 12:30.

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THE COMMISSIONER: Thank you very much. MR. WALLACE: Thank you.

THE REGISTRAR: The hearing is now adjourned till 2:00 p.m.

(PROCEEDINGS ADJOURNED FOR NOON RECESS) (PROCEEDINGS RECONVENED)

THE REGISTRAR: The hearing is now resumed.
MR. WALLACE: Good afternoon, Mr. Commissioner.

EXAMINATION IN CHIEF BY MR. WALLACE, continuing:

Ms. Dansereau, before the lunch break, we were talking about the division of responsibility for contaminants and fish between DFO and Environment Canada. You advised us that discussions are going on about that between yourself and the Deputy Minister of Environment Canada. I just want to get a little more specific about some of those issues.

We heard earlier in these hearings from Sylvain Paradis, former Director General of Ecosystem, Science Directorate of DFO, that DFO does not view marine contaminants, research and monitoring as its responsibility. I heard you saying that about monitoring, but being, if I may say, slightly more equivocal about the relative responsibilities for research. But I compare that to the evidence of Dr. John Carey, the former Director General of Water, Science and Technology Directorate at Environment Canada, who testified that Environment Canada is not monitoring water quality in the marine areas, except as it relates to Canadian Shellfish Sanitation Program, and it was under the impression, Environment Canada, that is, that DFO was responsible for monitoring marine contaminants. So that, would you agree, is a difference of view from what you expressed this morning?

- MS. DANSEREAU: Thank you for the question. If I may, I also would like to correct an error I made on this issue this morning --
- Q Please.
- MS. DANSEREAU: -- when I spoke about the date that the transfer of the so-called machinery change was made from DFO to Environment Canada, and I said it

was in the mid-1990s, but it was actually in the mid-1970s.

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- MS. DANSEREAU: Yes, and then an MOU was signed in the mid-1980s. And my understanding, not having been there, was that there were some pockets of work that remained at DFO, at least this is what I was told when I started looking into this. don't think -- it's clear that there are some differences of opinion between staff, some staff in the Department and that's why it's important for us now to be clearing up whatever those differences of opinions are. And when I say the Deputy and I are working on this, deputies never work alone, we work because people in the Department are working together and so folks inside of both departments are working their way through what the best advice is that they could give me to give to the Minister and my counterpart, his minister on this. So we will work our way through it. And again, it's a question of priorities, and I will take advise from our scientists, who will have to tell me the degree of risk that not doing that kind of toxic analysis or toxin analysis would pose for the fishery. And then together, inside the Department, we would have to determine whether or not we find a different way to get the information or we decide that it's not risky enough. give you that answer right here, right now because I would be waiting for advice on that from the people who know.
 - But you would agree at the moment, it appears that there is a gap in that neither DFO nor Environment Canada is doing monitoring of water quality in marine areas?
- MS. DANSEREAU: I don't know. I can't say that specifically, no.
- Q Okay. Let's touch on research, then, for a moment. And I'm not sure I completely understood your evidence this morning, but I think it was that you aren't sure who has the responsibility for research on the effects of contaminants on anadromous fish, whether it's Environment Canada or DFO; is that correct?
- MS. DANSEREAU: I think what I said was that I'm not sure, in all pockets of the country, how the

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division of labour has been established. I'm also not sure, in every part of the country, whether or not it's been determined that that kind of research is essential. And so I would defer to Laura to give a better answer on how we would make that kind of determination and where I would get the advice on almost an ecosystem approach to when and how we should be doing that kind of research. So I wouldn't say in all cases it's an absolute requirement and our responsibility. In some cases, it could be done from a fish health perspective and that could be yet another body of the government. So fish health that could have an impact on human health, there are places for that to happen and so I'm not sure. I can't answer the question specifically because we're still working out what the priorities are. But even if it was our responsibility, it would still be based on a priority system based on the risk of not doing it.

- Q Let me ask Dr. Richards, is DFO doing such research, and to be specific, the question is research on the effects of contaminants on anadromous fish?
- DR. RICHARDS: We are doing limited research, but again, as the Deputy has been clear, it is in the context of trying to meet the overall priorities. So there may be some questions, some management questions which are set which require having knowledge about that to answer some of those questions. We are not doing a broad-scale program on contaminants or that issue, but you've already heard some evidence from some of our scientists who are doing some of the contaminant research. But we have a small group and it has to be in line with what the overall priorities and the overall questions are.
- Q And can you quickly direct us to what overall priorities are determining what research you're doing in this area?
- DR. RICHARDS: Well, I think there's a few things I can direct you to. First of all, the document that you discussed early this morning was a document about how to look at the problem across the country. I think, if you look at the numbers in there, you'll see already that in Pacific, in the rest of that document, we did not have as big a program in that area, traditionally, as we did in

some of the other regions of the country. So we were dealing with a smaller program.

One of the things that we have done in terms of just being more overall efficient with that program, and because that kind of program requires some very sophisticated equipment, and to do that so one of the things that we did, it was decided that we would have two major laboratories across the country who would be capable of doing some of those more sophisticated analyses. One of them is the Pacific Region, it's based at the Institute of Ocean Sciences, and the other is in Quebec Region, at the Institut Maurice-Lamontagne. So we do have some capacity to do that, but it's not a huge capacity, and we are doing some work.

- And Peter Ross, who's the research scientist, or a research scientist at the Marine Environmental Quality Section of the Institute of Ocean Sciences here, in the Pacific Region, testified that DFO's lack of a dedicated fish toxicologist was certainly hampering our efforts to understand whether contaminants present a risk to what's happening to sockeye salmon. Do you agree with that?
- DR. RICHARDS: Well, I mean, he is certainly one of our experts and we certainly do rely on him and rely on his advice, but we do also need to put it into the broader overall context. We do count on our experts to be in contact with others in the field to bring in their knowledge, to make us aware of other factors that might come and play into that, and then we'd have to factor all that into the risks and look at the priorities. And I think, having done that, we think that probably, it's not that there couldn't be some potential there, but it's based on some of those analyses and having a discussion with Peter. I think the Management response is that it would be more efficient and more practical for us to look at some other avenues.
- So are you saying that you're not sure whether research on contaminants' effects for Fraser River sockeye is important?
- DR. RICHARDS: Well, what I'm saying is that we have to look at the overall suite of priorities, or look at -- we have to look at -- that's only one of very, very many factors. You know, as your

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reports have demonstrated, there are many different chemicals and many different kinds of things that could be looked at. In fact, there's a tremendous suite of different chemicals that could be examined. And at this point, we don't have any real good information about trying to narrow down that very big question to try to say, "Well, what would be really important to look at now?"

- Q So right now, DFO doesn't have a fish toxicology program in the Pacific Region; is that right?
- DR. RICHARDS: Not a fish toxicology per se. We have a laboratory that is capable of doing some analyses. They're used for different programs. One of the things that we're interested in is, for example, using those for tracers for ocean circulation. So there's different uses for some of that information.
- But can you tell me what is going on in terms of research on toxicology involving anadromous fish in the Pacific Region? We're in a situation of new --
- DR. RICHARDS: Yes.
- Q You know, lots of interactions with the industrial activities in British Columbia. There's all sorts of things going on.
- DR. RICHARDS: Mm-hmm.
- Q Can you be more specific about what you're doing looking at fish toxicology and relating to Fraser River sockeye?
- DR. RICHARDS: I'm not aware of any specific programs that we have that are specifically related to Fraser River sockeye. I am aware that we have asked our experts, such as Peter and some of his colleagues, to look at the issue and to provide us with some at least preliminary analysis based on their review and their knowledge that would be then fed into some of the discussions that we had at various meetings, that we're feeding into our advice to you and to the Commission, but that really is what we have done.
- Q Okay. So you identified Dr. Ross as somebody. Is there anybody else working in this area? I mean, he says there is no dedicated fish toxicologist in the Pacific Region so who's doing this?
- DR. RICHARDS: We have a number of other scientists who are working in that group besides Dr. Ross. I

mean, a lot of the things that they are working on are not necessarily so fish, but they would be looking at, you know, some other aspects of sediments or other factors, not just the fish factor because, really, we do have to look at, really, the broader ecosystem kinds of questions. So we have Dr. Robie Macdonald, who has got over 35 years of experience in the Department. We have Dr. Sophia Johannessen. We have Dr. Michael Ikonomou, and we have a number of chemists who are also working in the lab. And we have Dr. Andrew Ross, who is currently the head of our laboratory of aquatic chemical expertise.

- And are they looking into fish toxicology relating to the Fraser River sockeye? Dr. Ross identified this as something that was hampering his ability or DFO's ability to understand whether contaminants pose a risk to Fraser River sockeye. Would you disagree with that?
- DR. RICHARDS: Well, I think we have looked at the -you know, we have certainly talked to Peter, we
 have considered what he has to say and I am not
 aware of any specific projects that those
 individuals are involved in related explicitly to
 Fraser sockeye.
- O So --

- DR. RICHARDS: I think that was your question.
- It was my question. Would you agree, from that background, that it does not appear that the effect of contaminants on Fraser River sockeye is a priority for DFO?
- DR. RICHARDS: Well, I think that what we have tried to do is look at the weight of evidence, and we were thinking that it wasn't the first avenue that we thought was important in terms of the likelihood of finding some impacts. It was not where we would look first, and I think that that is consistent with the report from David Marmorek that was discussed earlier this week.
- Q Okay. In the 2009 report of the Commissioner of Environment of Sustainable Development, it was noted that the lack of interdepartmental cooperation between DFO and Environment Canada on Section 36 administration and it recommended that DFO and Environment Canada should clearly establish the expectations for Environment Canada's administration of the pollution

prevention provisions, including the expected interactions between the two departments to support delivery of the 1986 Habitat Policy. Now, DFO and Environment Canada responded by saying the departments accept this recommendation and by the 31st of March, 2011, we'll review the administration of Section 36 of the Act. So that was made in 2009, that commitment. The deadline has passed. What progress has been made since 2009 in reviewing or clarifying the roles of DFO and Environment Canada when it comes to contaminants research on anadromous fish on the Pacific Region?

- MS. DANSEREAU: There's been significant progress made on clarifying the roles and working on developing a solution. We don't have the final answer yet and whether or not it's specific to the work that you just described, I don't think I would go that far, but we are, as I've said earlier, working with Environment Canada at many levels to make sure that we achieve the best possible result. So we are in process right now and, hopefully, we'll have a better MOU soon.
- Q Any estimate of when soon is?
- MS. DANSEREAU: I can't give you an estimate. It's an active project that we have many people engaged in.
- I'd like to now touch on another issue which relates to commitments made with respect to policies, and in particular, I would identify the Wild Salmon Policy. Minister Regan wrote a cover message which was in the Wild Salmon Policy saying, "My Department is fully committed to the Wild Salmon Policy's implementation." Has DFO been and is it currently fully committed to implementing the Wild Salmon Policy, Ms. Dansereau?
- MS. DANSEREAU: As you know, it is an essential policy for us and it is definitely a priority policy on the West Coast. You will point to certain dates that have been defined in the document, itself, and some of those have --
- Q I may.
- MS. DANSEREAU: You may. And I will say that not all of those have been achieved, but it is the guiding document for the management of the Fraser sockeye and continues in that vein and we will continue to

try and achieve the goals as they've been defined.

- Q The Departmental Management Committee is a senior committee in your Department?
- MS. DANSEREAU: At the time of the writing of this document, yes, that's what it was called.
- Q What's it called now?

- MS. DANSEREAU: The Departmental Management Board.
- Okay. So keeping those two names in mind, when was the last time that the Wild Salmon Policy was an agenda item?
- MS. DANSEREAU: I'm not sure this kind of policy would come to the Departmental Management Board unless it was undergoing change of some type. And you may, I think you also know we have a different governance structure now, where we also have a Deputy Minister's Policy Committee, and that policy committee would be the place where changes to this, if there were to be changes to the policy, would be made. It is a regional policy. It's a national policy implemented in the region and the work on that implementation would be done by the Regional Management Team here in the Pacific Region, and they would be the ones that would be looking at this.
- Q My colleague has reminded me that your answer to my previous question, which was to put the quotation from Minister Regan to you, that it wasn't completely answered, and that is is DFO currently fully committed to implementing the Wild Salmon Policy?
- MS. DANSEREAU: Yes, absolutely, to the intent of the Wild Salmon Policy and whether or not we are able to meet some of the deadlines in there, I don't know because some of them were developed in the absence of science, and we are working at trying to get the answers to be able to set realistic timelines, but yes, in terms of -- I think I did answer it when I said it is our guiding document for the management of Fraser sockeye, and that would not be so if it weren't a priority.
- All right. You have answered it now.
- MS. DANSEREAU: Okay.
 - Q You said yes to the question so thank you.

 Getting back to the way it has been dealt with in the Department, and just pursuing this commitment for a moment, I think I heard you say, in my question about when it had last come before the

national management committee, by whatever name, in DFO, I think your answer was, "Well, I'm not going to -- you didn't answer that, but you said, "This is a policy, the implementation of which is in the region." So I take it from that that the answer is no, it hasn't come before the national committee, either the Management Committee, or its successor, but that that shouldn't be surprising.

- MS. DANSEREAU: That's right.
- Q Okay. But it has not come before?
- MS. DANSEREAU: My recollection is not. David may have a different recollection, but --
- MR. BEVAN: Well, clearly, the Minister of the day, and the Deputy, et cetera, had discussions on the approval of the Wild Salmon Policy at the time it was approved. I can't recall the exact governance that was used at that time, but there were discussions at the ADM, Deputy Minister and Minister of Level 2 approved the Wild Salmon Policy at the time that it was approved.
- MS. DANSEREAU: And that's correct, I mean, that is where it came, and it is a policy that if it's approved by the Minister, then it has to be approved by the Deputy and by the senior management structure, but whether or not it has come back since then, I don't think it has.
- Q I think that's your recollection, as well, Mr. Bevan?
- MR. BEVAN: That's correct.
- Q Let me just pursue that. It seems to me it's a national policy, even though it's being implemented in the region. Does that mean there's no reporting function through to those committees by the Pacific Region on how it's coming and, as you point out, there are some other deadlines that have been missed here?
- MS. DANSEREAU: It is a living document. It's a document that guides how the Pacific Region provides advice to us and to the Minister for the Minister to make decisions on a yearly basis for the management of the fishery. So the Policy, itself, doesn't come back under regular review, but the application of the Policy is living within all of our managements plans.
- Q One of the issues that we've heard, and perhaps the principal one, certainly, a principal issue that's come with respect to the Wild Salmon Policy

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is the fact that the implementation doesn't appear to be happening, certainly not on the timeline that it was designed for, and question whether at all. And it's been suggested by a number of the people who spoke on this subject over the course of our hearings that things might happen more quickly if there were a champion in the Department pursuing this. And it's a national policy, why isn't there a national champion keeping on top of this?

- MS. DANSEREAU: The Regional Director General of the Pacific Region is a very senior person in the Department. They sit on the Management Board and they sit in all of the important national They also report directly to the committees. Deputy Minister and that means that they are as senior as you can get, apart from the Deputy or the Associate and, therefore, they are significant champions in their own right. There's a senior ADM responsible, the position that David used to hold, senior ADM on the Fisheries side, or now ecosystems management side, ecosystem-based management side, and that person would also be very aware and very supportive, and very much a champion of the Wild Salmon Policy. So between those two, you have some very serious attention paid to this. Some of the deadlines are not -- I don't want to speak on something that I might not be an expert on, but my understanding of some of the deadlines and why they are not met, as conservation units or some research, is that science builds on science, knowledge builds on knowledge and we simply don't have sufficient knowledge at this point to have achieved some of the deadlines that we thought we could, but that doesn't mean that the work is not ongoing.
- Q So as I understand your answer, Ms. Dansereau, it's that the Regional Director General is part of the national scene, a very senior person in the Department and that's the person to whom you look for the implementation of this Policy?
- MS. DANSEREAU: Absolutely.
- Q And that's where you look to find a champion? MS. DANSEREAU: Yes.
 - Q And that, Ms. Farlinger, would be you. Can you explain why the issues of delays in implementation and the question of commitment and these issues

have not been brought forward by the Pacific Region to the national committees? Well, first of all, I would say that in MS. FARLINGER: the work planning that we do between the region and national headquarters, that the implementation of the Wild Salmon Policy is very much within the framework of the policy framework for the Department. And it is, for Pacific salmon, specifically the work that we do for that set of species under the broad national implementation of the national what we call the sustainable fisheries framework. So it is certainly discussed in those terms, in terms of the budget that's allocated to Pacific Region to do its work generally on fisheries management, budget for science, budget for enforcement, budget for all the various activities that relate to the management and assessment of Pacific salmon.

It certainly shows up in terms of the proportion of our funding that is dedicated to Pacific salmon and has shown up in Science priorities in our Science work plan over the last five or six years, and in terms of management decisions, for example, that we have put to the Minister in the Integrated Fishery Management Plan for each year. It's also part of the Habitat Program.

Now, the question of whether it has gone as fast as originally envisioned is a different question than whether it's been implemented throughout our programs. And I think I have said here before and continue to say that it is implemented throughout our programs. And some of those deadlines continue to be a challenge for us.

One of the concerns, I think, is that the implementation, as it was originally envisioned, there's one thing that continually comes to my mind, that we would have limit reference points for all the salmon stocks in B.C. by two years. In fact, we're simply not realistic and that's been part of the learning of our implementation of the Policy. So I would say that the intent of it and the foundation for the decisions that get made in terms of the integrated fishing plans are very much a part of the work we do in salmon, which amounts to in the order of 60 million or more dollars a year in terms of what we put into that.

But certainly, there are elements of the strategy that is set out that, you know, have not been done on deadlines and I think has something to do with the fact that probably, all that information for all those conservation units, by the way, which numbers change from time to time, you know, probably will never be done. But it is our intention to continue to gather that information and to use that information in the management decisions that are envisioned by the Wild Salmon Policy.

Ms. Farlinger, as you've pointed out, we've been through a lot of this before, and the purpose of this panel, really, is to put some of these issues, the overlying issues related to the Wild Salmon Policy and the gap between the policy and implementation to those from Ottawa. I want to try and keep this to a broad-level discussion, but it may not be possible. And things that have happened since you were last here.

Let me try this suggestion. I hear the explanations as to what's happening about the Wild Salmon Policy to be, "Well, it affects how we do all of our business, whether it's in, you know, catch monitoring, or whether it's in habitat protection," or all of these decisions are informed by things we're learning and the point of view from the Wild Salmon Policy. And you know, people have used very high-minded words and important principles to defend it. They describe it as a very forward-thinking transformative policy. And in a context that's slightly different, there's some words of a witness that I'd like to put to you and just see whether or not you would agree that that's what's happened here. I'm, frankly, more interested in pinning down what the actions are and finding out whether or not it's really been implemented or whether or not it's just in the background. And the comments here are from Trevor Swerdfager, who was speaking in the context of aquaculture, and he said:

I continue to experience great difficulty with the concept of ecosystem-based approach to management ... I think that the idea has tremendous theoretical allure, and I think to build an argument against it is probably

difficult. I think that the idea of integrating multiple variables, multiple aspects of the ecosystem, understanding it on a broad-based multi-disciplinary scientific perspective makes an awful lot of sense.

Translating that into specific management decisions and actions is much more difficult ...

... making the transition between the concept of ecosystem-based approaches into direct management action is a challenge.

And I hear that conceptually, these are giving rise to the way, you know, a new appreciation to the way Fisheries is looked at, but the question is how, specifically, is the Wild Salmon Policy changing decisions in terms of Fisheries management? I mean setting escapement levels, choosing gear types, openings and closings, those sorts of specific things, how is it really working on the ground?

MS. FARLINGER: In terms of harvest management, there's certainly decisions that have been made every year since the Wild Salmon Policy was announced. And I did mention this before, that part of the Wild Salmon Policy objective was to write down what was, in some measure, already beginning to happen, and that was the consciousness of stocks of concern and weak stock management in mixed stock fisheries.

We have made decisions about harvest rates each and every year on fisheries that specifically have to do with the protection of what we would now call weak stock as we move into the conservation unit definition and the development of the limit.

Reference points, that information is directly taken into account in a very detailed way in the management of, for example, in this case, Fraser sockeye and other sockeye stocks.

The management plan includes consideration of the Early Stuart sockeye. It reduces sockeye fisheries in order to protect that. It reduces the harvest rate on other abundant stocks in order to protect, for example, Cultus sockeye, which I

know you've heard many times.

In the Skeena River, we have reduced a harvest rate down to what fundamentally varied between 40 and 60 percent to now between 20 and 30 percent.

The Science activities towards defining the conservation units and developing those limit reference points continue and we are expecting for the sockeye stocks to have those by the fall of this year, which is along the schedule that we had talked about.

In the case of habitat, the implementation of a risk-based approach and identifying the pathways of effects is one of the ways that has taken us towards the Wild Salmon Policy. We have developed a framework for habitat reviews. We have done reviews of, admittedly, a limited number of conservation units with respect to habitat.

I think, in all these ways, in terms of how we have allocated Science priorities, in terms of management decisions and advice we provide to the Minister, we point to the Wild Salmon Policy, we indicate how this information is consistent with the Wild Salmon Policy and so it's resulted in decisions on harvest, it's resulted in collecting and organizing the information on fish habitat with respect to priority habitat for sockeye, and it's set priorities for Science. So I think that in many aspects, it's been done.

I can speak about ecosystem in one way. For example, the environmental information that is incorporated into the day-by-day management of the Fraser sockeye, and I think you heard Barry Rosenberger and others describe the management adjustments, these are made based on water temperature and in-river conditions that are, in fact, broader ecosystem considerations about the salmon migrating up the river. So I think there are a broad suite of ways in which the Policy is being implemented. If you look at the strategies set out on page 17 of the Policy, are every one of those done? No, they are not, but the effective regulation and the decisions that are made, and the Science priorities and the work we have done in habitat and integrating ecosystem into decisions all take us in the direction of the intent of the Policy. So that's really the only

- way I could describe how it's being implemented. Q Thank you, Ms. Farlinger. If we can just sort of bring our record up to date, and I have a couple of questions about this. And perhaps it's best put to Dr. Richard. Mr. Lunn, could you pull up document 30 MR. WALLACE: from the Commission's list? Wild Salmon Policy Action Step 1.3 requires the monitoring and assessing of the status of conservation units, including a statistically-
 - monitoring and assessing of the status of conservation units, including a statistically-based and cost effective monitoring plan and monitoring program established by the Department and partners and funded annually. So in terms of assessing CUs, we have heard from Dr. Sue Grant and a previous version of her paper on this subject is in evidence. I wonder if I could ask you, Dr. Richards, to just identify the document on the screen, which is entitled, "Evaluation of Uncertainty in Fraser Sockeye Salmon ... Wild Salmon Policy Status using Abundance and Trends in Abundance Metrics."
 - MR. WALLACE: And if you scroll to the bottom of that page, Mr. Lunn, you will see that that is working version, July 5th, 2011. Can you identify that as a new iteration of this?
 - DR. RICHARDS: Mr. Commissioner, there have been several iterations of this document, of which this is one. It is not the current final iteration.
 - MR. WALLACE:
 - Q Yeah, but it follows from the one that's already in evidence?
 - DR. RICHARDS: It follows from the --
 - Q But there may have been other individual ones?
 - DR. RICHARDS: -- from the original one that was submitted and that was reviewed, you know, previously.
 - Q And which is Exhibit 184 in this proceeding.
 - MR. WALLACE: Thank you. Could that be marked, please, Mr. Registrar, as the July 5th draft?
 - THE REGISTRAR: It will be marked as 1914.
- 41 MR. WALLACE: Thank you.

EXHIBIT 1914: Evaluation of Uncertainty in Fraser Sockeye ... Wild Salmon Policy Status using Abundance and Trends in Abundance Metrics, July 5, 2011 draft

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MR. WALLACE: And then if I could ask you, Mr. Lunn,
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            please, to pull up Commission's document 31, which
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            bears the same title and is dated August 25th,
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            2011?
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            Is that the most recent version?
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       DR. RICHARDS: This is the most recent, current
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            version.
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            Thank you.
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       DR. RICHARDS: This is not the final version of the
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            document, but it's close to final.
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       MR. WALLACE: Could this be marked as the next exhibit,
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            please?
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       THE REGISTRAR:
                       1915.
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       MR. WALLACE: Thank you.
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                 EXHIBIT 1915: Evaluation of Uncertainty in
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                 Fraser Sockeye ... Wild Salmon Policy Status
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                 using Abundance and Trends in Abundance
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                 Metrics, August 25, 2011 draft
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       MR. WALLACE:
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           But this is the most recent version?
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       DR. RICHARDS: That's correct.
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            It's not yet finished?
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       DR. RICHARDS:
                     That's correct.
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            And what is the timetable for completing this
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            work?
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       DR. RICHARDS: I expect that it will be completed
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            reasonably quickly at this point, certainly this
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            fall.
                   The process now is that this is a final
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            draft that was prepared by the authors. It needs
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            to be approved by the chair of the subcommittee.
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            There needs to be a review to ensure that the
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            authors have addressed the issues that were raised
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            by the reviewers, or the issues that the
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            subcommittee requested that they identify and
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            change or update in their document. So this needs
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            to be reviewed to ensure that it meets the
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            requirements and then it will be -- and it may
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            involve, in order to do that, some very minor -- I
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            would expect at this point no more than sort of
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            minor changes.
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       MR. WALLACE:
                     Thank you, Dr. Richards. Mr. Lunn, could
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            you pull up, beside or below this document so we
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            can see the title of both, Exhibit 184, as well?
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            And we have the two documents, the one on the
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right being the current version of the draft of

Exhibit 184, which is on the left, and we'll see that the title has changed to go from "Fraser Sockeye ... Wild Salmon Policy Evaluation of Stock Status: State and Rate," to "Evaluation of Uncertainty in Fraser Sockeye ... Wild Salmon Policy Status using Abundance and Trends in Abundance Metrics." I've purposely not tried to pronounce the Latin that's in the title. Can you explain, Dr. Richards, please, why the difference in wording?

- DR. RICHARDS: The choice of title is really a choice of the authors and, in this case, it's really the authors have chosen to change the title of their paper, but the rationale for that would be to make the title actually more reflective of the content of the paper. It's not the content of the paper has not really changed substantively. There are some differences in the paper in terms of the way the figures were portrayed, but fundamentally, the same results are being given in both versions of the paper.
- Q Okay.

- DR. RICHARDS: So this was really just a change in title, it was not a change in what the paper is really about, or the purpose of the paper.
- Q So the original title was wrong?
- DR. RICHARDS: Well, it's not --
- Q It's not an evaluation of stock status, it's rather an evaluation of uncertainty?
- DR. RICHARDS: Well, whether a title is wrong or right, I don't think is not -- this is science, it's not a right or wrong kind of question, it's really that's what the authors had chosen initially to call it and decided that something else was a better descriptor of the content.
- Would you agree with me, and I'm not sure to whom I should put this question, but perhaps you, Ms. Dansereau, that action step 1.3 calls for an evaluation of the status of CUs? If you go to --
- MR. WALLACE: Is there room for a third document up there, Mr. Lunn?
- MS. DANSEREAU: I'm familiar with the document and, actually, I'm sure I can look at it and say yes without looking.
- 45 MR. WALLACE:
 - Q So would it be fair to say that the title of the first version of this reflected action step 1.3,

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46 47 but according to the evidence we just heard, not the content and now neither the content nor the title reflect completion of action step 1.3?

MS. DANSEREAU: I can't speak to this paper, nor can I speak to scientist's choice of a title. That's entirely their purview. I would never question their choices in any way at all so I can't speak to that.

Q Dr. Richards?

- DR. RICHARDS: Yes, thank you. I think, in my view, that this really does address action step 1.3 in terms of the status. This paper does portray, it does provide the benchmarks. It does provide a lot of information on the status of Fraser River sockeye salmon by CU. It isn't definitive, yes, this stock is in the red zone, or the amber zone, or the green zone, but it does provide a lot of information that I think our managers can use in terms of how they choose to go forward and manage Fraser sockeye based on that information. gives them the full range of uncertainty around those different benchmarks. It's done those benchmarks with different models so they can look at the values or the interpretation, how the interpretation may be impacted by different assumptions that would be in different other statistical models used for analysis. So it does not give one concrete answer, but it does give the full suite of information that I think the managers will want and will be useful to them in doing that. So yes, I think it does address that. Would you agree, Ms. Farlinger? Did you wish to say anything?
 - MS. FARLINGER: I think this is one of the challenges, that there is a considerable separation between management and the questions that management asks and the advice that science can provide. And I think what this paper does is tell us what information the scientists can provide.

We have, for about 10 or 15 years, in the process of review, and Science has specifically addressed this, asked for the uncertainty around advise so that when we're making decisions and understanding the risks of decisions, we know about the uncertainty. And I suspect that you've learned a lot of about this over the last few months. And so when we get this kind of advice,

we specifically ask for that, for how sure are you, how good is this information, what has been taken into account, what hasn't been taken into account? And that allows us to develop the advice for decisions about the fishery with an understanding of the uncertainty that we're dealing with.

- Q Dr. Richards, am I correct, though, that this document does not assess the status of CUs, Fraser River sockeye CU.
- DR. RICHARDS: Okay. I think that I would have to say that depends on exactly what you mean by that question because if you look at some of those tables that are in the figures that are in the document, you can see that it does provide some advice, and with some uncertainty about what the status is, which zone each of those CUs is in. All that information is provided in exhaustive detail in that paper.
- So you're satisfied, are you, that when this document is completed, it will allow the determination of upper and lower benchmarks and assessment of the Fraser River sockeye CUs?
- DR. RICHARDS: The paper provides a series of benchmarks for looking at upper and lower benchmarks for stock status. So there is information on that available.
- No, but will you be able to determine them for each -- does this determine them for each Fraser River sockeye CU?
- There is information in this paper, at DR. RICHARDS: least there were a few CUs for which there was not really data available, but for the majority of the CUs, there is information that will identify upper and lower benchmarks, that gives the upper and lower benchmarks and classifies, you know, is it red, amber, green, and that information is in this paper. If your question is is there more that we can do on this, then I'd say yes. And unfortunately, this is the way that science works, there's always more that we can do on any specific question. So yes, we can continue to do more work on this, we can continue to look at different kinds of models to do these kinds of analyses, so we can go on and go on, but in terms of the immediate question, we have provided that information.

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Thank you. Policy action step 3.1 of the Wild Q Salmon Policy, which is on page 23 of Exhibit 8 requires the Department to identify key biological, physical and chemical indicators of the current and potential state of lake and stream And it says that within two years, an ecosystems. ecosystem monitoring an assessment will be developed and integrated with ongoing assessments and reporting of the status of wild salmon. More than two years, obviously, has passed since 2005. The evidence we've heard is that there hasn't been any progress on this action step. Can you tell us, Dr. Richards, the current status of 3.1, or perhaps it's Ms. Farlinger?

MS. FARLINGER: Go ahead.

- DR. RICHARDS: Okay. Well, I mean, I think that this really has been difficult, into looking at this, but I can say that now there is some work that is ongoing nationally. There are one or two national review meetings through CSAS, the Canadian Science Advisory Secretariat that is sponsoring it this year, to look at the issue of indicators, particularly for freshwater systems. I think we are interested in trying to do work which is, you know, consistent, and so we'd have a consistent national approach. Coming up with appropriate indicators is challenging. There has been a huge body of science around that particular question over the last few years and, you know, it seems like it should be quite simple, but in fact, this kind of task has engendered a tremendous amount of scientific debate around the choice of indicators. And so there is work that is ongoing and we will be having some national peer review meetings yet, before spring.
- I think it's fair to say that following the report of the Commissioner of Environment and Sustainable Development in 2009, there was a further commitment to moving towards ecosystem approach. It's a more general commitment than the Wild Salmon Policy. So what is the timeframe within which you expect to meet this Wild Salmon Policy commitment?
- DR. RICHARDS: Well, I don't think I want to give a specific timeframe because, you know, these things really are works in progress and ongoing and as we've heard earlier, if Science gives you a

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timeframe, they're going to probably be wrong. So I think I'd like to hedge my bets on this one, thank you.

- Q We've heard a lot about what it will cost to implement the Wild Salmon Policy and the fact that the policy, itself, speaks of being implemented without additional funding. Various numbers we've heard. We heard about funding initially of a million dollars a year, reducing after that. Saunders made a similar observation in evidence. We heard from a couple of witnesses speaking from outside the Department who were very familiar with the Policy, Jeffery Young and Brian Riddell, that \$3 million a year, or two-and-a-half million dollars a year, in Brian Riddell's case, for a short period of time, would be enough to get this going. Has there been any assessment within DFO as to what it will cost to implement the Wild Salmon Policy?
- MS. DANSEREAU: Sue could answer on the more specific, but I'm having trouble with the word, "implement," in the context that it's being used here. Wild Salmon Policy, as I said earlier, guides decision making to the most senior level inside the Department and even though all of the subparts of the Policy haven't reached their full fruition, I guess, that doesn't mean it's not being implemented. We don't have everything done as we said we would in here, but the guiding principles are the guiding principles by which we make decisions. The work that is guiding our science is work that you've seen the scientists are working on, trying to fill in the blanks in terms of knowledge. So as I also said earlier, science builds on science. When we fill in some knowledge gaps, sometimes we develop new knowledge gaps, sometimes we close them and it's hard to predict precisely what it would cost to fill all the knowledge gaps and how long it will take to fill all the knowledge gaps. So I worry when I think that there's an expected absolute end point to the document as though it's sitting on a shelf and not being used. It is being implemented.
- Q Let me stop you, if I may, and just see if I can clarify this, Ms. Dansereau.
- MS. DANSEREAU: Yeah.
- Q I certainly wasn't implying that science is finite

and comes to a terminal conclusion and that's it. Clearly, that's not the case. But the Wild Salmon Policy, as I understand it, has two parts, to basic parts to it. One is getting the information and getting into putting into place a system for ongoing assessment and monitoring. And the status of the CUs is one thing we talked about. I hadn't actually had any questions, but I'll put one in now about the state of assessment and monitoring of habitat, which is another whole piece of the strategy and the policy. And the evidence is pretty clear that that has not been done, except with respect to Fraser River sockeye. As I say, I was trying not to go over old ground here.

So I think it's one thing to say what we learn from the Wild Salmon Policy informs what we do in everything, but I suggest to you that it's a very different thing to say that general thing. That's the sort of comment that I think Mr. Swerdfager was speaking of, the difficulty. But here there's some, I suggest, quite specific kinds of information that need to be brought up to date, and I think the evidence is we're almost there on some of it, not on others, but it's not there yet.

And then there is the whole question of how you make use of that information to plan for this sockeye salmon fishery and the application here. So saying that it informs in one thing, but actually -- so to me, implementing the Wild Salmon Policy means getting to the state where you're actually using it as a planning device, with all of the information you've promised to put in place, and then applying the planning techniques. And the planning techniques are also set out there. They include a collaborative approach, they include transparent decision making, and a number of very clear pieces. So simply saying it informs us generally, to me, I suggest, is not implementation. So that's what I took the Wild Salmon Policy to be setting out as being the requirement, and please correct me if you have a different impression.

MS. DANSEREAU: Thank you, and I don't -- will not correct you, we all have our own interpretations of these things, but what I meant was if I look at the principles, which, to me, a policy should be much more about principles than it should be about

specific targets and timelines for implementation because if I was writing this today, I would separate some of the parts of this out and call those one policies, and I would call some of the other pieces that are more specific, with targets and timelines, I would call those a program, and they would be treated quite differently. But the guiding principles, conservation, honouring obligations to First Nations, open process, sustainable use, those are principles that guide our decision making today, constrained by —— some of our transparency requirements are constrained by ministerial discretion and the right of the Minister to make final decisions, but the ——

Q In a very consultative, open and transparent way?
MS. DANSEREAU: Yes, and we are extremely consultative,
and that, to some extent, we were before this
document was written, but we became even more so
after this document was written. So the essence
of the document is what I think is being
implemented, and that's how I mean the decisions
are being informed because they are being informed
against these guiding principles and by some of
the actions.

Now, there are pockets of insufficient knowledge, I completely grant you that, but those knowledge gaps, we are working to fill. And I can't give you a dollar amount on what it will take to get to the end point of all of those knowledge gaps because as I said, sometimes getting one answer creates more questions.

- Q Thank you. Strategy 6 of the Wild Salmon Policy is a five-year independent review. That was last year. We now have -- a contractor has been selected and contracted to do the review.
- MR. WALLACE: Mr. Lunn, could you pull up Commission document 32, please?
- Now, may I ask, Ms. Dansereau or Mr. Bevan, is this work plan intended to reflect the Department's fulfilling of its commitment to action step 6.2, an independent review of the success of WSP in achieving its broad goals and objectives? Oh, thank you.
- MS. FARLINGER: It certainly is intended to be a significant step in meeting step number 6, yeah.
- Q And this is the work plan developed for an independent consultant, Gardner Pinfold, correct?

MS. FARLINGER: That was the consultant who was selected, yes.

Q Yeah.

MR. WALLACE: May this be marked, please, as the next exhibit?

THE REGISTRAR: 1916.

EXHIBIT 1916: Wild Salmon Policy Final Work Plan, July 15, 2011

MR. WALLACE:

- Q Now, am I correct that the evaluation framework for this work plan was developed by DFO?
- MS. FARLINGER: Yes.
- Q Is that consistent with an independent review, or should the reviewer also have had the opportunity to establish the evaluation and framework?
- MS. FARLINGER: We're certainly in a position to have to inform any person who would do this independent review what it is we would expect out of it, what the components of it were and, therefore, set out the kinds of questions that we would hope to have answered in the review. And yes, as I've talked about previously here, we sought advice from the Pacific Fisheries Resource Conservation Council, we sought advice from our Internal Audit Section, and ultimately, this, the evaluation strategy was based on all of that and our internal review of what needed to be asked in the Wild Salmon Policy, or about the policy.
- Q Do you expect this review to tell you whether or not you'll be able to implement it and current budgets?
- MS. FARLINGER: As I recall the evaluation framework, I don't believe that there were questions about the budget in the evaluation framework.
- I'm just trying to think. The Wild Salmon Policy, itself, describes the review as being directed to the implementation of the policy and suggests that the implementation will be revised to address shortcomings that may be reducing its effectiveness. Is the review limited to that issue of implementation, or is it looking at it more broadly.
- MS. FARLINGER: I would say, in general, that the evaluation framework talks about the objectives that the policy set out and the implementation is

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as described in that section that you just read,
            yeah. So I wouldn't say it asks questions such as
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            is this the right policy, it asks questions about
            implementation of the policy.
            When will that -- we asked for drafts of that and
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            for the final, which is supposed to be due next
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            week; is that correct?
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       MS. FARLINGER: My understanding is in early October,
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            we're supposed to see the report, yes.
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            Early October. And it will be available publicly
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            and to the Commission --
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       MS. FARLINGER:
                      Yes.
           -- in early October?
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       MS. FARLINGER: Well, it will be available to the
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            Commission. We probably wouldn't publish it
            publicly until we've gone through it with the
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            reviewer and finalized the report.
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            Will you make it available to the Commission and
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            participants?
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       MS. FARLINGER: Yes.
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           When you have it?
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       MS. FARLINGER: Yes.
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            So in early October?
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       MS. FARLINGER:
                      That's my --
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            Our hearings will be over by then so I'm not --
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       MS. FARLINGER: That's my understanding of when we
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            expect to get the report, yes.
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            Thank you.
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       MR. WALLACE: Mr. Commissioner, I'm about to move on to
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            another point. I'm conscious that we're here till
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            4:30 this afternoon, but perhaps we could take a
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            15-minute break at this point?
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       THE COMMISSIONER: Yes, that's fine. Thank you.
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       THE REGISTRAR: The hearing will now recess for 15
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            minutes.
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                 (PROCEEDINGS ADJOURNED FOR AFTERNOON RECESS)
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                 (PROCEEDINGS RECONVENED)
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                       The hearing is now resumed.
       THE REGISTRAR:
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       MR. WALLACE:
                     Thank you, Mr. Commissioner.
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       EXAMINATION IN CHIEF BY MR. WALLACE, continuing:
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            I wonder if I could just go to a different topic.
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            DFO has spent a lot of money over the years with
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            respect to the reallocation of fisheries as to the
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PICFI process, of course, demonstration fisheries. My question is has DFO determined that it will move fisheries in-river and, if so, how much of the fishery will be moved, for whom, and at what cost.

- MS. DANSEREAU: I think Sue will answer this more fully. The decisions at this point are not whether or not that's where we are going, but whether or not it's appropriate under certain circumstances to -- to go there, and --
- Excuse me if I may. I'm not quite sure I understand the difference between the determination of the appropriateness of doing something and whether or not you're going to do it.
- MS. DANSEREAU: I'll let Sue answer it.
- Q Thanks.

MS. FARLINGER: Part of the reallocation to First
Nations to support their increased involvement in
the fishery, including the salmon fishery, has
included demonstration fisheries in the in-river,
in the Fraser River. And demonstration fisheries
are intended to be just that, to test how
successful those fisheries could be. First of
all, meeting conservation objectives, so avoiding
mixed stock fisheries, providing additional
economic access to First Nations, and thirdly, I
guess, whether they can be viable or profitable as
an economic exercise. And so the PICFI projects
as set out were intended to test those objectives.

So what we would eventually do is take that information and provide it to decision-makers in terms of whether this would be permanently implemented, whether this would be continued for some time, or whether it would not go any further at the moment. So that decision, as the Deputy said, has not been made. But the exercise at this point is really to test out the feasibility of those fisheries on both a conservation and an economic scale.

Q Thank you. PICFI has been around for a while now and is about to come to an end, the funding, it seems. Can you describe the nature of the research that's been done and what you've learned and what -- how you're going about assessing what you're learning, or have learned from this process on the two points you make, the conservation

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aspect and on the economic viability.

MS. FARLINGER: Well, I should say on the conservation aspect, we have supported these demonstration fisheries to the extent possible, where we can get a greater separation of stocks, so where we're moving away from the mixed stock fishery problem. So that is inherent in the test. And so secondly, these take place in a couple of places, one we have -- a couple that we have upriver in the Fraser River where the stocks are fairly welldefined and they're fundamentally in their stream. And we have a couple on the Skeena River where in fact there's still a mixed stock problem, one might say, in Babine Lake, but it's infinitely more reduced than it is in the fishery down at the mouth of the river. So I would say in the matter of selectivity or for conservation reasons, we think those are the basis of the selection of the projects.

The focus really has been around what methods can be used to catch the fish, are they effective, can enough fish be caught to have a reasonable fishery, essentially can we assess how many fish are caught, do we have the right monitoring in place, and those kinds of things.

So, yes, we are every year monitoring those fisheries against those aspects. I think it's fair to say the two in-river fisheries that have occurred as demonstrations in the Fraser River are still very much in the experimental phase.

- Q These are the two -- where are they, they're at Kamloops Lake and...
- MS. FARLINGER: There's one in, yeah, Shuswap and one farther up the river, that it's just -- sorry, I'm having a moment.
- Q How are the -- and those are the only two, and there's some evidence, I think, before the Commission that suggests that they're small and very marginally effective, and that's the extent of the testing of the economic viability of these fisheries is it, is those two?
- MS. FARLINGER: In the upper Fraser River those two fisheries have taken place. There also have been some work done with the Chehalis group off the main stem of the Fraser River, and there has been a combination of what we used to call Excess to Salmon Spawning Requirements fishery and an

Economic Development fishery with the Chehalis Band, as well, in the lower river.

- Q And can you describe how you're evaluating the success of those projects?
- MS. FARLINGER: At this point we're looking at whether the fishery itself can physically be prosecuted, how successful those fisheries have been. We've provided allocations through the retirement of commercial salmon licences to those fisheries, and in at least one year, last year I believe, 2010, we reallocated fish from that fishery back down to the regular commercial fishery because the fishery was unable to take the amount of fish that was allocated to it.

So what we're really evaluating now is can these fish physically be caught in a way that avoids the capture of other stocks, and can they be done in a way that allows for ultimately for them to be profitable.

- Now, is that a formal study with, you know, with a timeline and a focus and a process and so on, or is it just -- or are you just gathering information ad hoc? I want to understand how this is being conducted, and what -- how useful the information will be when you're done.
- MS. FARLINGER: To some extent it's very practical and ad hoc, but on the other hand, we at the end of each year assess how much fish has been caught against the allocation, what the marketing, if any, has been done with respect to the fish, and whether that was profitable for the fishermen, whether they can pay their fishermen out of the catch, whether they can whether they can market the fish. So we ask ourselves that set of questions. It's only as structured as that.
- Q And so far you don't have the answer.
- MS. FARLINGER: Well, we have some answers, but in those two particular examples I mentioned, I think the fishery is still very much developing in terms of understanding what gear to use and how to catch the fish.
- Q And how long do you intend to pursue this before you make some policy changes to reflect the result?
- MS. FARLINGER: That's part of what the end of the program, the end of the PICFI program, it's one of the decisions we'll have to provide advice for in

1 terms of moving forward, post-PICFI. 2 So this is advice for the 2012 season? 3 MS. FARLINGER: Yes. 4 That's coming right up. 5 It is. MS. FARLINGER: Yes. 6 And who in your Department is looking at this? 7 MS. FARLINGER: Well, the Integrated Fishery Management 8 Plan is approved by the Minister. All the fishery 9 managers and the stock assessment -- Science stock 10 assessment folks are doing the background on it. 11 And ultimately as we move into fishery planning 12 for the year, it's customary for us to take items 13 that require ministerial decision and forward 14 briefing material and advice for those, and this 15 will be done as part of that. 16 That process, the Integrated Management Plan 17 process is beginning when for 2012? When does 18 that start? 19 MS. FARLINGER: Well, there are some fisheries still 20 going on, of course, but the post-season reviews 21 will start shortly with all -- with First Nations 22 and with recreational and commercial stakeholders, 23 and the environmental groups that are part of the 24 Integrated Harvest Planning Committee. And we 25 move into, from the late fall into January, 26 February, March, the planning for the fishery for 27 the next year. 28 So you're going to need to provide advice within 29 the next six months on this issue? 30 MS. FARLINGER: Yes. 31 And what will that advice be? 32 MS. FARLINGER: We haven't developed the advice, so I 33 don't know what it will be at this time. 34 When will you be in a position to know what you're 35 advice will be for this imminent... 36 MS. FARLINGER: Well, as you say, sometime in the next 37 six months. 38 Mr. Bevan, do you have any observations to make 39 about moving fisheries upstream and the economic 40 viability of that? 41 MR. BEVAN: Clearly, there's -- where we have mixed 42 stock fisheries and we have co-migrating weak 43 stocks, we've had to restrict harvesting.

means that there's been a reduction of economic

When we were looking at this whole question, the

issue is, moving fishing upstream gets to a large

opportunities for a number of resource users.

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extent or can to a large extent deal with the issue of the mixed stock fishery problem.

So you have more separation of the stocks, but it's up to the region to really then determine whether or not can the fish be harvested in those circumstances, and if they can be harvested, what are their economic returns on that harvest. And that I would have to leave to the region. Because from a conceptual point of view it's -- going to the terminal fishery makes sense from a conservation point of view, but it may not make any sense unless it's practical to prosecute the fishery. So that's up to trying it out and seeing what comes of it.

And some of it, you know, a great deal of analysis may not be required. If you can't catch the fish, that it's clearly not going to require a lot of analysis to determine if the fish are uncatchable. And on the other hand if the fish are in such shape that there's no market for them and no opportunity to use them, that is another issue. So I think you have to try it out and see what the results are and that's what the region has been doing. So I only make that observation to corroborate what Sue Farlinger said.

- Are you aware of any further economic analysis being done on this issue beyond what we've learned, which is a couple of test fisheries?
- MR. BEVAN: There's no economic analysis being done on it in terms of the headquarters, et cetera, because we need to have practical experience on this issue. We can't do a theoretical economic analysis. We need to know if the fish can be caught, and if so what shape it's in and what the value is.
- Q One of the implications of moving the fishery further upriver, are issues of Aboriginal versus general fishing opportunities. Did the Department put its mind to that issue, and does it have a position on that?
- MR. BEVAN: I think that's reflected on the whole design of PICFI, where we were moving the fishing upstream by retiring allocation or licences, and then moving the allocations associated with them into the upstream. And if it works, fine; if not, as was noted sometimes the allocations go the other way if they can't be adequately used in the

upstream fisheries.

So the policy has been not to compensate, and that goes back a long way, that whole policy on both coasts. When there's a court decision and a requirement of reallocation there has been public monies used to make those adjustments in the allocations in a way that doesn't put the burden on a small subset of Canadians, specifically commercial licence holders.

We did that a long time ago in moving towards the FSC fisheries, as a result of the **Sparrow** decision, and many people have perhaps not recalled the fact that there was money spent to make those changes. And we've done that again through PICFI.

- Q Have you determined nationally whether non-Aboriginal fishers will have an opportunity to fish commercially in-river?
- MR. BEVAN: I think that when the program was designed, the intention was to allow people who may wish to move into the river to switch gear and do so. nobody's interested in doing that at this point. But there was no contemplation of saying that you must fish in the estuary below Mission, and you can't go anywhere else. There was the contemplation that if there's an opportunity to integrate these commercial activities, then it should work both ways. It's just that the level of interest has not been there. And I don't think -- I'd have to turn to Sue to find out if there's been any desire to have a dialogue on that, to make it practical. But to my recollection, in the information that came forward at the national level, there was no real uptake on that opportunity.
- MS. FARLINGER: I think, first of all, one of the objectives of PICFI was to increase Aboriginal participation in the commercial fishery, and to do that by the retirement, the willing retirement of licences. So this was not forced, it was a willing retirement. At the same time there was an opportunity for anyone who participated in the marine fishery to try demonstration fisheries, which were fundamentally share-based fisheries. And we have had uptake on both sides. And but there has been, as David said, no explicit provision or request to provide access to non-

Aboriginal fishers up the river.

- Q We've heard a lot today and throughout these hearings about the budgetary constraints in DFO, and the program that we're discussing now has cost and is costing millions of dollars, as I understand it, to support commercial fisheries inriver, perhaps for economic, perhaps for conservation reasons. Is there a more effective use of funds for these conservation-related efforts, should this money be put into habitat monitoring or marine research, or implementing the Wild Salmon Policy, or some of the other things that we've talked about?
- MS. DANSEREAU: I think the evaluation that we're currently doing of PICFI will tell us exactly that, and tell us whether or not there are some parts of PICFI that are working better than others. And based on that, we will make a determination as to whether or not we seek more funds to do -- continue the same amount of work, or to do other things.
 - Q There's been discussion about a share-based fishery. Ms. Dansereau, is it DFO's intention to move towards a share-based model for the Pacific salmon fishery?
- MS. DANSEREAU: It's certainly our -- we certainly have an interest to move to share-base where it works for both the fish and the people who fish. So we are taking steps, and Sue can speak in much greater detail on this, we certainly have an interest in looking at this for the -- in those situations where it is feasible.
- Q Ms. Dansereau, do you wish to add to that -sorry, Ms. Farlinger?
- MS. FARLINGER: That's okay, I was just contemplating the implications of that.

There certainly are conservation advantages to the share-base fishery. One of the challenges in the commercial salmon fishery is it has been in many instances a mixed-stock fishery, as Mr. Bevan said. And you're very familiar with, I think, the implications of a weak stock management approach to mixed-stock fishery, which is it limits access to some more abundant stocks in order to protect some of the stocks of concern, or weaker stocks. And for that reason, the fishery has been for 15 or 20 years moving closer into the river.

 One of the advantages of a share-base fishery is then that those people who are -- because of gear, because of location, because of their own personal interest, are -- have less access to the stocks, can then move their share around in the fishery.

Another benefit that we have learned from the demonstration fisheries is those who are able to operate on a share basis were able to get a much higher price for their product per fish, take less volume and make the same amount of money.

Now, there are advantages and disadvantages, and there are certain parts of the fishery that may be more amenable to share-base than others, and that's part of the analysis and work we're doing at the moment. But the ability to move shares around from a conservation perspective is very attractive simply because of the problems that we have in a mixed stock fishery.

So it's not a panacea, it's not the answer to everything, but there are a number of both conservation and economic benefits to individuals who fish around the fishery. That doesn't mean it's perfect.

- Q As I hear your answers, I hear strong support for the benefits of this different fishing regime. That being the case, why have you left it to a voluntary participation, as opposed to changing the way fishing is regulated in the Pacific Region for salmon.
- MS. FARLINGER: Well, one of the reasons is the same, as I mentioned, around the in-river fisheries. It's a feasibility issue: Can it be accomplished, can fishermen actually derive greater benefits, can the Department and the public get greater conservation benefits, and those are certainly the kind of questions that need to be asked, and is it practical?

We have been doing a fair bit of work both internally and with the fishing community on what is the currency. The current allocation framework in the salmon fishery is based on a sockeye equivalent type currency, and so there are a number of questions about is there an appropriate currency? Well, the people who have been trying these things out have been able to find the currency. So those are the kinds of things we

needed to test prior to providing, once again, the advice to the Minster about the longer-term direction in the fishery.

- Q I hear you again giving the questions that need to be answered about these new regimes that look attractive. How is DFO going about evaluating the voluntary share-based fisheries you've got going now and other information to answer those questions?
- MS. FARLINGER: We ask for information back from the participants in terms of, well, for the participants it's mostly is this practical, can it be prosecuted, how is your how is it affecting your market, how is it affecting your price? We consult with processors, who, for example, will tell us, and this certainly has been an outcome and advice we have received from processors, it's far more straightforward for us to be able to manage the product, not having it all dumped on the dock the same day, for example. We can stage it in over a certain number of days, therefore getting a higher value product, therefore returning a higher value to the fisherman.

We have been able to pilot some pink salmon fisheries, seine fisheries, that we could not have prosecuted in the past because of concern about having the whole fleet out at a time when there were coho, Thompson coho in the stocks. So we're gathering information on what fisheries we have been able to carry on and whether they're more selective and, in fact, whether it has been of benefit for the fishermen.

Now, not all fishermen have chosen to participate in this, and part, of course, of moving forward and providing advice to the Minister is getting the views of the fishermen in terms of whether they would be -- find it more useful to do this.

Q In those answers, Ms. Farlinger, which it sounds similar to the answers on the in-river fishery, you talk about some of the perceived advantages, some of the questions that need to be answered. My questions to you is, and it's the same as my question on the previous area, can you tell us with what rigour DFO is trying to get the answers to these socioeconomic conservation and conservation questions. And I hear the questions,

and I hear the issues, and I used the word "ad hoc" which you responded back in the other area, and I'm wondering whether or not it's the same sort of situation here. There's not a rigorous careful study that can be evaluated so that decision-making can be done on it.

- MS. FARLINGER: Well, to be fair, I think that when the time does come to provide the advice, that is, when the analysis directed at the kind of questions that I've outlined is actually done, and sometimes that takes the form of surveying fishermen, sometimes it takes the form of reporting on consultations, and sometimes it takes the form of analyzing data that's been gathered, for example, around the profitability, or providing an analysis of whether the conservation benefits have been effective or not.
- Q But has DFO done any of that, that's my question.
 MS. FARLINGER: I think your -- if you ask us, did we start this program with a rigorous evaluation framework? No. We started this program with a set of questions that we said we would analyze in providing advice to make decisions about moving forward. And that set of questions I think I've generally covered, and those, and analysis to support those will be part of the advice that goes up for decision.
- Q Mr. Bevan?
- MR. BEVAN: I just would add one thing. There was already a socioeconomic cost as a result of the mixed-stock fisheries, and that is foregone opportunities. These are attempts to provide stakeholders with an opportunity to come forward with proposals to avoid those foregone opportunities by going to shares, by going to different approach to the fishery. They then prosecute the fishery and then we'll be able to evaluate the outcome of it.

But it's not like we're saying it's either this or that, it's this kind of fishery or that kind of fishery. What it is, is it's a restricted mixed-stock fishery and very little opportunity, because you can't go and have a high harvest rate on the combined stocks, or it's an opportunity to have those fisheries elsewhere, based on a different model. So that's the context. It's not like we're saying it's status quo, or it's a

difference. Because the status quo in the current context is not there. We aren't doing what we did in the past. We are not having high harvest rates on co-migrating mixed stocks where you have strong and weak. We don't do that. And if you want to have an opportunity to get at the strong, you have to come forward with a proposal under these pilot projects and under the share arrangements to try and find an alternative approach.

So that's what we're going to have to evaluate, whether or not the forgone is being offset by these changed approaches.

- Thank you for that, Mr. Bevan. But would you agree with me that regardless of what is being balanced, and I've decided the scales here in doing a socioeconomic analysis, the analysis has to be done. It's not enough to simply say this is bad and this is good, therefore we'll do that. I mean, don't you have -- and my question is what's DFO doing to get to the bottom of the real issues. Are they -- have they engaged in, you know, a socio-economic analysis on this issue, and share-based fishery which will allow for appropriate decision-making?
- MR. BEVAN: Well, I think right now we're into a very small or no fishery. That doesn't take a lot of in-depth analysis. If you don't have an opportunity to fish because of conservation concerns, and we balance that off against if you've got a different approach, you have a fishery, then you can take a look at the outcome of that fishery and how it worked.

I take your point that we do need to do the in-depth analysis at some point on the decision, but it's fairly stark. It's not a complex issue if you don't have a fishery versus you do have a fishery. There's clearly a difference between those two realities.

Yes, Ms. Dansereau.

MS. DANSEREAU: If I may, these are pilots that we are testing here. We don't in this Department move quickly when we are changing the regime by which fishermen or fishing people function. We don't simply announce a change without having done a significant amount of work with them and make sure that we have a significant number of them in agreement with the approach. And so using the

pilot and the testing approach is a way of opening the door to see if there will be some benefit, and if those work then that gets put into a basket for us to analyze.

But we do do share-based fisheries, as we said earlier. The groundfish fishery, halibut, that is share-based and it is successful. We have other very economically viable, very successful fisheries across the country that are share-based. And so we know that under the right circumstances, and we have to be careful what those circumstances are, it can be extremely economical. And as David says, sometimes it will come down to you can either fish or not fish, take your pick. So but we would have to work with the industry, and sometimes we have to give that the right amount of time to make sure that they are willing and able to participate in something like this.

And that, for me, as the person who would providing the final advice to the Minister, would be what I would look at. I would look at the results of the pilots. I would look at the advice coming from the region, first of all on the conservation impacts. Are we continuing to ensure that we're protecting the stocks that need to be protected? Secondly, is the fishing community able to participate in this the way that we want it to? What is the repercussion of us going in that direction? And with all of that together, I would provide advice to the Minister to consider changing the management approach, and these things take time.

- Q They take time and I suggest that they also take a certain discipline of analysis and what I hear that I haven't heard that the sort of analysis, which it seems to me would be required to make appropriate decisions is being done. You put out the pros and cons and you say it's happening elsewhere, but has the application of this principle on this fishery been analyzed so that when you give advice to the minister it is, "Here are the benefits. Here are the costs. Here" --
- MS. DANSEREAU: Yes. Yes, we would do that.
- 44 Q You will -- sorry, you will do that?
- MS. DANSEREAU: That is how we provide advice.
 - Q But I understood --
 - MS. DANSEREAU: And that --

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- Q But I haven't heard that there's been a socioeconomic analysis done on this.
 - MS. DANSEREAU: Because we're still in the pilot stage. So we haven't completely turned over the fishery to a different approach at this time, but it is under consideration.
 - Q But isn't the turning over based on a decision which is based on the advice you give which follows from having analyzed the test?
 - MS. DANSEREAU: And that's why we have the pilots.
 - Q And do you have in place a method, a methodology, a timeframe, to do the analysis to give that advice?
 - MS. DANSEREAU: It will be -- in some cases it will be, as David said, sometimes it's as simple as saying, "If we use this approach we were able to prosecute a fishery this year, and if we didn't use this approach we were not able to." Sometimes it's a simple as that, and other times it will be -- there will be more information that's required, so we would determine that on a case by case basis. But there is analyses.
 - MR. BEVAN: But the pilot phase is the gathering of information phase. You can't do an analysis unless you know that one type of approach can actually be an alternative and a difference. in doing the pilots, that's the portion where you try out these concepts, you see if they're pragmatic, and then you start to gather enough information so you can do an analysis. without the information there is no analysis, and without the information it's also difficult to, "Can we do a comparison? Can we do the analysis? What's the design? What are the criteria," et cetera. We need to see if this stuff, these ideas, can be, in the salmon context, put into place at all. And if they can be, okay, what are the -- then we can do the economic analysis at that point, when we've actually seen a few years of -- and with salmon it does take a few years, because what worked in 2010 may not work in 2011, because you're dealing with different abundances and you're dealing with huge variations in circumstances, so we need to gather information for a period of time before we can actually design a conclusive analytical design. But again, it can be very stark if the choice is go/no go, and it

doesn't take the degree of analysis to determine whether or not you should go versus not go.

MS. FARLINGER: I think there has been some analysis and some of it will certainly be brought to bear, but there will be more. I'd point to a couple of things. We analyze, over time, with an independent panel, the value of licences, and that value of licences reflects the earnings in the fishery. And so that's one independent study of value in the fishery that we would use. There are many ways that we do this.

In the Skeena River, following the report of the independent science panel on the Skeena, which looked at exactly these kinds of issues, mixed stock fisheries and the kinds of changes that will be required to implement the Wild Salmon Policy, we followed up with an economic study that was —did take a look at the regular commercial fishery in the mouth of the Skeena River.

So those are just a couple of examples that I point out that there is economic information available. And when we come close to the analysis in providing the advice, we would be bringing that as well as any additional analyses that we needed to do.

- Ms. Farlinger, do you have a timetable for completing the analysis and giving the advice?
- MS. FARLINGER: I do have a timetable for having to provide advice up through our system and to the minister for the 2012 season. That is not necessarily the same timeline as an evaluation of a share-based fishery on salmon.
- Q Will you be giving the minister advice this year for the 2012 season on a share-based fishery?
- MS. FARLINGER: That has yet to be decided.
- DFO's management of finfish aquaculture has been -- and its implications for the Fraser River sockeye is one of the issues before the Commissioner. Government responsibility for aquaculture regulation and oversight was transferred from the Province to DFO. Andrew Thomson, who was the director of aquaculture management, director at DFO here in the Pacific, testified that you, Ms. Dansereau, made the decision to grandfather and rollover existing aquaculture licences in December 2010; is that correct?

- MS. DANSEREAU: I'm sorry, that's very specific. remember the decision process that we went through. I'm just trying to remember if we had to go to the minister for the final decision, and I can't remember that. But I would have been part of the decision process around that. And the decision -- okay, so you were involved in the decision --MS. DANSEREAU: -- to simply --MS. DANSEREAU: Yes. -- to grandfather the existing provincial licences? MS. DANSEREAU: Yes.
 - Q And this, I take it, was with -- the minister may well have been involved in that, and it was based, I take it on briefing materials you received from the Pacific region?
 - MS. DANSEREAU: Yes. I don't know if it's briefing material, but definitely briefings.
 - Q Briefings, yes. Dr. Ian Fleming testified that a large number of wild sockeye salmon population share a confined migratory path in which they must pass through a constricted area on the east coast of Vancouver Island. He testified that this seems to be and this is a quote:

... seems to be an important area that would require protection if there is --

were risks of disease. Did the decision to grandfather existing aquaculture licences include any consideration of the unique geography of the Fraser sockeye migration route?

- MS. DANSEREAU: Yes. And the Department was not ignorant and I use that in the formal definition of the term -- of the word of the relationship between finfish aquaculture and wild salmon, even prior to us taking over jurisdiction. So we were very involved in understanding the dynamics and the -- in all of the various geographic systems.
- Q Was there thought given as to whether these constricted areas on the east coast of Vancouver Island ought to receive special protection?
- MS. DANSEREAU: Well, as I said, we've been working on -- the Department had been working on these files for a long time, and had the Department been of

 the opinion that the location of the sites posed some threat to the wild salmon, we would have done something even before it was within our jurisdiction. We would have worked with the Province and we would have imposed certain restrictions. So there was no need, at that point, to do a new analysis, because we had already been involved in the process.

Q Dr. Dill testified, here, that in relation to possible cumulative impacts of fish farm wastes, I'm quoting:

...although the impacts of any one farm are local, in the Discovery Island areas there are a large number of farms that the fish have to pass sequentially during their migration, and there simply have not been any studies on what the consequences of that might be.

Now, in grandfathering these licences, and in your previous involvement with them, as you mentioned, did you or the minister consider the cumulative risk that may arise from multiple farms in a congested area?

- MS. DANSEREAU: We had been, as you know, the science around the relationship between wild salmon and farmed salmon is very much under dispute. There are differing opinions in the scientific community of those impacts. And our science has always been the advice that we have always received from our scientists has always been that there is no threat at this point, or there's no threat that we are completely aware of and I'll let Laura speak to that in more detail that it's certainly not of sufficient threat to cause us to intervene. We are all very taken with this question. We are all interested in this question. And science is very active in trying to make sure that we are minimizing the risk.
- Q Dr. Richards, you were invited.
- DR. RICHARDS: Well, I think we do have a fairly active research program in this area and the -- we have a fairly structured process to work with our managers to identify the priority questions to be looked at that would then help direct the science. One of the questions and one of areas of research

that we have been looking at is, in general, the circulation through some of these areas, and we have developed, because of the importance of those questions, we have developed some capacity to do some modelling that we could then to -- be able to look at some of these -- that would be -- could be useful as a tool to help address, you know, some of these questions.

- Did you look specifically at cumulative impacts of the number of farms?
- DR. RICHARDS: I'm not aware of the work that we have done, at this point, on cumulative impacts, per se. It's been more directed at, you know, more specific questions. But we do have some tools that I think we would be able to use to start to look at some of those questions.
- MS. FARLINGER: Since about 2003, we took what was a list of criteria for screening new sites for finfish aquaculture and developed it into with the help of Laura's folks and the circulation modelling and other things a far more structured system for analysing sites for the location of fish farms, and it involves sort of a high-level screening, which says, you know, you need to be a kilometre away from the mouth of a salmon stream, and you need not to be over valued ecosystem components like eel grass or rockfish areas or route -- specific areas that are used by salmon and other fish. And so there's a rough screen.

And then there is a very detailed screen that takes a look at the circulation in the area and the deposit of organic material and the level of production. And we also have a set of best practices given to us by Environment Canada that are required by the -- that the operator commence to doing these things. And all of those things we've been doing since early 2003. All of these were brought over into the new aquaculture licence under the aquaculture regulation, specifically to make them conditions of licence, including the fish health plan.

Prior to that, DFO advised on the fish health plan. We provided scientific advice to support the fish health plan. Prior to that, we encouraged the Province to manage aquaculture on a bay or ecosystem kind of basis. We supported the activities, for example, between marine harvest

and the ENGO that works up in the Broughton Archipelago to take a look at fallowing and areatype effects. And part of the planning of our implementation of the new aquaculture regulatory system is, in fact, to work towards an area-based plan.

So those kinds of cumulative effects are very much in our sights in terms of looking at how aquaculture is managed and regulated. And it can range from disease practices of -- disease avoidance practices and fish health practices on farms to make sure they're coordinated right through to the cumulative impact of deposition.

And as Laura said, we've developed the capacity and brought people into the Department who have the capacity to look at that circulation and, in this case, deposition, so that the idea of an area-based management of aquaculture is definitely what we're shooting for in the new regulatory regime.

- Q Thank you. So this new regulatory regime will apply to applications for new licences?
- MS. FARLINGER: Yes.
- Q What about existing licences? Is DFO reviewing those?
- MS. FARLINGER: In terms of site applications, they would apply to new licences. In terms of the existing farms, the management of those farms on an area basis would apply to all of the operations in an area.
- Q But you're not applying the new standards to a review of current licences?
- MS. FARLINGER: The idea of managing farms on an area, let's call it Broughton Archipelago basis, is that the farms work together in all their practices and we work together to make sure we understand the cumulative effect and ensure that their management practices are done in a way that works in an ecosystem basis; that is, one is not acting independently of another. So yes, the existing farms would be subject to moving towards this baybased kind of management. But as for site selection, no, that would only apply to new sites.
- Q Yes. So looking at current licences more generally and not with respect to the particular question, the question I asked previously, but generally, is DFO looking, now, having

grandfathered all these licences, is it looking at them, now, and evaluating them anew, or is this just letting them run their course?

MS. FARLINGER: All the monitoring provisions of the licence which have to do with waste management, which have to do with fish health plans, apply to all of the licences existing and, if any, new. for example, a significant amount of the human resources that went into the aquaculture plan are to provide - and you may have heard about this from Andy Thomson - for monitoring teams that go about -- go around and monitor the waste management from each farm, so they dive down and assess. There's a structured evaluation framework, thank heavens for that, and also a structured program for looking at the fish health provisions, and that each farm is being monitored with respect to how they're meeting the fish health provisions.

So just comparatively, before DFO had very little control over those fish health provisions. We certainly advised on them, but we were not the regulators. Now, we require those fish health provisions to be met as a condition of the licence, and we can enforce those provisions.

What I hear you describing is what I would expect a regulator, responsible regulator, to do with respect to anything that it regulates, which is monitor how people, whether or not the entities they're regulating are doing what they're supposed to be doing.

My question was a little different. You've inherited these licences from the Province. You knew something about the farms but not, presumably, about the regulatory scheme and the standards they're supposed to meet. Is DFO looking anew at these licences to see whether or not they should be maintained, they should be renewed, you know, are you looking at it with fresh eyes now that you have this new responsibility?

MS. FARLINGER: I'm trying my best to answer. I think that all the monitoring provisions for -- apply to those old farms and to the new farms and, in fact, where we're considering any movement for any of the existing farms, it is where they can demonstrate they can reduce their environmental

footprint. So are we going back and saying, "Can you operate?" We're only saying that in the context of, "Do you meet these conditions of licence," and all the regulatory things that are said. "Are you doing waste management in this way? Are you doing fish health in this way?"

So on one side, we are not going back and reviewing each farm as if it were a new site, if

- that's the question you're asking.

 Sort of. I realize your ability to effect an existing licence is going to be constrained. But these licences are all for a finite period and there are going to be applications, presumably, for renewal, and it seemed to be it was possible that DFO might be looking at these licences to -- in anticipation of renewals. No?
- MS. FARLINGER: The licences that were issued in December of 2010 were issued for a certain amount of time I can't remember exactly what it was, at this moment but we would be looking at renewing those licences, but ensuring that they were operating within the regulatory framework, not the question of whether they would be operating, unless they were out of compliance with the regulatory framework.
- MS. DANSEREAU: If I may, just to make sure we're clear on the notion of grandfathering, grandfathering didn't mean that the world prior to the change for the fish farms will carry on the same way it was prior to the change. It simply meant that they were allowed to continue operating, but now they're going to be operating under the new regime, and as Sue says, if, through time, we find that they are not meeting the obligations under the new requirements, then whatever actions that are specified in the regulations we can take we will take.
- Q Our perspective here is the Fraser River sockeye, and my initial questions related to the particular phenomenon of the Fraser River sockeye migratory route and a concentration of farms in one area. And in the draft aquaculture application form, which is an exhibit, there's no mention of sockeye migration route as being an issue that is something on which someone has to respond. If this is a matter of importance, why is it not something that farm -- applications for farms

addresses?

That was a very badly structured question.

MS. FARLINGER: Well, I'll do my best.

Q Thank you.

MS. FARLINGER: There is, as I mentioned earlier, a very rough screening set of criteria that are based on the pre-2003 set of agreed siting criteria, and they do -- they're specifically about physical sites and they do talk about avoiding valued ecosystem components, including salmon streams, the mouths of salmon streams. So it certainly is considered.

Based on the science we have now, and I can ask Laura to confirm this, the management of any impacts that may occur is basically focused on how the fish health plan and the waste monitoring for the farm is managed. So I'm just -- I'm going to leave it there and see if Laura can pick it up. No?

- MS. DANSEREAU: If I may, there are two parts to this and I don't know if I'm -- I was just trying to get a precise answer, but the application for the site is different from the regulation and all the requirements under the regulation. So the application for the site that we have in here is a very minor document compared to everything that a site operator was going to have to implement, as Sue described, all the information, the monitoring, and all of that, and that's in the regulation.
- Q No, and I understand that. But the context in which I was looking at this was essentially the siting issue, which is an application for a licence issue, I think. Mr. Bevan?
- MR. BEVAN: Yeah, I think there is a distinction there. The Province retains the leasing requirements, so they have some role in the issue of allowing sites in the first place. Then there's the process that we go through in terms of evaluation of the impacts, et cetera, before determining whether that site should be used.

I think, though, it's important to understand that the whole design of the regulatory regime that we put in place is based not just on a suite of measures that each licence holder, in terms of the aquaculture industry, each farm site would have to respond to, it also looks at looking at

the entire area and setting up a management plan for all of the aquaculture activities within that area. And based on those, the sites that are in that area, the criteria that would apply to them would be defined. So there's going to be conditions of licences set that are not cookiecutter. They will be reflective of the overall plan that must apply in the geographical area or the ecosystem that is being used by all of the farms in that location. So that may be something that would change if there's more sensitivity in one location versus another.

- Q And I take it from that that the number or the concentration of farms would be looked at in that context?
- MR. BEVAN: The concentration of farms or what they're allowed to do in that area based on the concentration. If there's a concentration of farms in the area there may be different requirements relevant to waste management and so on and so forth. So the density could impact the kind of licence conditions that would apply in those locations.
- Q Requirements to fallow the farms at particular times?
- MR. BEVAN: Things like that could be considered.

 Certainly it's not something you do just as a,

 "We're going to come in and dictate." You're

 going to sit down and talk with the people in that

 area, just as we do with fisheries. We talk to

 the people about the need to deal with the

 conditions of the fisheries and how they're going

 to be prosecuted, and we do the same thing to

 develop an aquaculture plan for that geographical

 area.
- Q Who's going to pay for this?
- MR. BEVAN: Pay for it? There is an obligation, obviously, on the part of participants to meet the requirements. So when we lay down the requirements in terms of having the plan worked out with stakeholders and then that sets criteria that would be reflected in licence conditions, it's the obligation of the person who has the permission to conduct that economic activity to comply with the licence conditions.
- Q Who's going to pay for the licence evaluation, the monitoring, the --

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MR. BEVAN: We've already done that.

- Q -- various activities that you've mentioned here? Is that something that you would look at a user pay system for?
- MR. BEVAN: We've already had a program in place and it was funded from national headquarters and put in place in the region, that includes the monitoring, the enforcement activities, et cetera. So we haven't, at this point, contemplated a user fee or something to offset --
- O You are or are not?
- MR. BEVAN: No, we haven't contemplated having the industry then pick up the tab for all of the DFO staff. But we are suggesting - not suggesting, we are saying - that the conditions that are going to be laid out in the licences as they are defined as a result of those plans, that's not -- that's the responsibility of the industry to meet those conditions and provide us with the information, provide us with the data, et cetera, make it available to DFO staff so we can ensure the public that we are maintaining a sustainable activity. That's their role. Our role would be to take that information and all that data onboard and to provide the confidence through a transparent process with publicly provided information to the Canadian public that we are maintaining sustainable activity.
 - Is there a policy reason why you wouldn't impose the cost of regulation on the industry that is profiting from the activity? And the parallel from earlier today comes to mind, that the commercial fishers are to pay for the catch monitoring.
- MR. BEVAN: They don't pay for fishery officers. They don't pay for all the science. They don't pay for all of that activity. So the parallel is actually exactly the same between the commercial and the -- industry and the aquaculture industry. There's no difference in approach between those two. And it wasn't because we were going to be consistent with the commercial cash. That's a factor, obviously. We don't want to impose costs on one group competing in the same markets versus another. But it takes time to do those designs and we concentrated on sustainability and on the issue of being able to demonstrate to the Canadian public

that we had it in control. That's where we spent our energy in getting that up and running on -- in response to a deadline imposed by the courts. The costs of catch monitoring are to be paid by the commercial fishers? MR. BEVAN: And the cost of providing us with all the data on disease, on waste management, on all of the activities, that all rests with the industry. MR. WALLACE: Thank you. I haven't quite done with this topic, but I suggest, Mr. Commissioner, this would be a good time to break. THE COMMISSIONER: Thank you very much. THE REGISTRAR: The hearing is now adjourned until ten o'clock tomorrow. (PROCEEDINGS ADJOURNED TO SEPTEMBER 23, 2011, AT 10:00 A.M.)

I HEREBY CERTIFY the foregoing to be a true and accurate transcript of the evidence recorded on a sound recording apparatus, transcribed to the best of my skill and ability, and in accordance with applicable standards.

Karen Hefferland

I HEREBY CERTIFY the foregoing to be a true and accurate transcript of the evidence recorded on a sound recording apparatus, transcribed to the best of my skill and ability, and in accordance with applicable standards.

Pat Neumann

I HEREBY CERTIFY the foregoing to be a true and accurate transcript of the evidence recorded on a sound recording apparatus, transcribed to the best of my skill and ability, and in accordance with applicable standards.

Irene Lim